TRANSPORTATION ACQUISITION MANUAL NOTICE

DATE ISSUED: November 8, 1994

TAM NOTE 95-01 SUMMARY

This Transportation Acquisition Manual Notice (TAM NOTE) 95-01 is issued under the authority of the Transportation Acquisition Manual (TAM) 1201.102 and amends the TAM as specified below:

TAM Chapter 1234, Appendix A, Major Acquisition Policies & Procedures (MAPP), has been reprinted in its entirety and is effective January 1, 1995.

FILING INSTRUCTIONS (Retain all divider Tabs)

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Glossary of Acronyms

Glossary of Acronyms

(Original signed by)

Linda M. Higgins
Director of Acquisition
and Grant Management

CHAPTER 1234

MAJOR SYSTEM ACQUISITION

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CHAPTER 1234

MAJOR SYSTEM ACQUISITION

1234.001 Definition.

(c) The authority of the agency head under (FAR) 48 CFR 34.001(c) is nondelegable.

1234.003 Responsibilities.

- (a) The authority of the agency head under (FAR) 48 CFR 34.003(a) is delegated to the Assistant Secretary for Administration. Appendix A contains the written procedures implementing OMB Circular A-109.
- (c) The determination of the agency head under (FAR) $48\ \text{CFR}$ 34.003(c) is nondelegable.

1234.005 General requirements.

1234.005-6 Full production.

The authority of the agency head under (FAR) 48 CFR 34.005-6 is nondelegable for Level I and II acquisitions and delegated to the Administration Acquisition Executive for Level III acquisitions (see Appendix A, Major Acquisition Policies and Procedures).

TAM 1234-1

U. S. DEPARTMENT OF TRANSPORTATION

MAJOR ACQUISITION POLICIES & PROCEDURES (MAPP)

FOREWORD

This document establishes uniform policies and procedures for acquiring major items, systems or services for the Department of Transportation (DOT). It implements Office of Management and Budget (OMB) Circular A-109, entitled Major System Acquisitions, dated April 5, 1976. This document must be read in consonance with the Federal Acquisition Regulation, the Transportation Acquisition Regulation Regulation Acquisition Manual (TAM), the Federal Information Resource Management Regulation, OMB Circular A-109, and any implementing Operating Administration quidance.

This document entitled Major Acquisition Policies and Procedures (MAPP) is divided into four sections as follows:

Section I General Information Pertaining to DOT Major Acquisitions

Section II Major Acquisition Process

Section III Transportation Systems Acquisition Review

Council (TSARC) procedures

Section IV Documentation

The MAPP was effective January 1, 1993, and is hereby revised as a result of changes recommended by the Major Acquisition Policy Council. The MAPP has been reprinted in its entirety with change bars indicating areas that have been revised. This reprint replaces the January 1, 1993, version of the MAPP found in TAM Chapter 1234, Appendix A and is effective January 1, 1995, for all major acquisitions. In keeping with the spirit of the National Performance Review recommendations, efforts have been made to streamline the process as well as ensure that major acquisitions are handled consistently throughout DOT.

Operating Administrations are to ensure that any necessary change to their implementing guidance is in place by January 1, 1995. It is the responsibility of each Operating Administration to ensure that this document is distributed to all individuals who are involved with the acquisition of major items, systems, and services.

(Original signed by)
The Deputy Secretary

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Glossary of Acronyms

SECTION I - GENERAL INFORMATION PERTAINING TO THE DEPARTMENT OF TRANSPORTATION MAJOR ACQUISITIONS

A. **PURPOSE**. This document establishes policies and procedures for acquiring major items, systems, and services that satisfy operational and support needs of the Department of Transportation (DOT) and its Operating Administrations (OA). It implements the Office of Management and Budget (OMB) Circular A-109, entitled Major System Acquisitions, dated April 8, 1976, within DOT.

B. APPLICABILITY AND PRECEDENCE.

- 1. Applicability. This document applies to all DOT acquisitions with a Total Acquisition Cost of \$50 million or more except for construction or other improvements to real property (as defined in the Federal Acquisition Regulation (FAR) Part 36). The applicability of this document includes, but is not limited to:
 - a. A new or replacement acquisition for supplies and/or services with a Total Acquisition Cost of \$50 million or more, which may be provided by a contractor directly or indirectly through an interagency or intragency agreement regardless of the type of funding appropriated for the effort, and whose total acquisition costs may include:
 - (1) Research, design, development, installation, testing, evaluation, demonstration, production, services, or initial provisioning (e.g., spare parts, documentation, training);
- (2) Rehabilitation/overhaul or upgrading of a system, subsystem, or major components in the deployment phase;
 - (3) Services for a five-year period including Architecture and Engineering services;
- (4) Federal Information Processing (FIP) resources procurement; or
- (5) An acquisition funded by an Operations Appropriation for a five-year program period (which may cover multiple contracts) or the life of an implementing contract that is greater than five years.
- (6) An acquisition executed through a combination of contracting and assistance instruments.
- b. Acquisitions with a Total Acquisition Cost of \$50 million or more for which the OAs' involvement is limited to the development of demonstration hardware and/or software for optional use by the private sector rather than for the OA's own use; and

- c. Those programs designated by the Transportation Acquisition Executive as major acquisitions, regardless of the costs.
- d. Acquisitions with a Total Acquisition Cost of \$50 million or more for which the mission needs have been justified, funded, and approved by another agency; however, the extent to which these acquisitions must follow these procedures shall be determined on a case-by-case basis by the Assistant Secretary for Administration.
- 2. **Precedence**. This document ranks first in order of precedence for providing policies and procedures for managing Departmental major acquisitions, except when OMB Circular A-109 (hereinafter referred to as A-109), statutory, or regulatory requirements override.

C. **DEFINITIONS**.

"Acquisition Phase" is the period of time following a Key Decision Point when specific activities are conducted to achieve acquisition objectives.

"Administration Acquisition Executive" (AAE) is the Head of the Operating Administration (HOA) or designee, no lower than two levels below the HOA but, in no case, lower than the Associate Administrator level or Chief of Staff for the Coast Guard.

"Administration Acquisition Review Council" (AARC) is a permanent group of senior OA officials designated by the HOA to perform internal OA level reviews of major acquisitions.

"Agency" means, in the context of A-109 and this document, DOT.

"Agency Component" means, in the context of A-109 and this document, the OAs of DOT, which are:

Federal Aviation Administration (FAA)

Federal Highway Administration (FHWA)

Federal Railroad Administration (FRA)

Federal Transit Administration (FTA)

Maritime Administration (MARAD)

National Highway Traffic Safety Administration (NHTSA)

Office of the Secretary of Transportation (OST)

Research and Special Programs Administration (RSPA)

St Lawrence Seaway Development Corporation (SLSDC)

United States Coast Guard (USCG)

"Exit Criteria" means program specific accomplishments or performance parameters that must be satisfactorily demonstrated before a major acquisition can progress further in the current acquisition phase or transition to the next acquisition phase.

"Key Decision Point" (KDP) is the point in time when an acquisition comes before the cognizant acquisition executive for approval to proceed to the next acquisition phase.

"Level" is the major acquisition category (i.e., Level I, II, or III) determined by the Transportation Acquisition Executive at KDP 1.

"Life Cycle Costs" means Total Acquisition Costs plus operation, maintenance and support, depot development and support and disposal costs over the useful life of an item or a system.

"Low-Rate-Initial-Production" (LRIP) means the production of an item or system in a limited quantity to: provide articles for operational test and evaluation; establish an initial production base; test the production process/production line; and/or permit an orderly increase in the production rate sufficient to lead to full-rate production upon successful completion of operational testing.

"Major Acquisition" is an acquisition that is typically directed at and critical to fulfilling an OA mission; entails the allocation of relatively large resources to procure, whether by purchase or lease; and warrants special management attention.

"Major Acquisition Policy Council" (MAPC) means a management group reporting to the Transportation Acquisition Executive and comprised of the Assistant Secretary for Administration; the Director, Office of Acquisition and Grant Management; the FAA Executive Director of Acquisition and Safety Oversight; the USCG Chief, Office of Acquisition; and, as requested by the Transportation Acquisition Executive, other OA Acquisition Executives who have major acquisitions subject to this document.

"Major Acquisition Review" is a periodic review of a program during the acquisition phases to assess progress and address any concerns or issues.

"Then-Year Dollars" means a method of adjusting dollars for the effects of inflation such that out-year resource requirements are expressed in the actual dollar amounts needed in those years to meet program requirements.

"Total Acquisition Costs" (TAC) means all costs for developing, acquiring, and fielding by contract, interagency agreement, and/or other funding instruments, supplies and/or

services for a designated program through purchase or lease, whether the supplies are already in existence or must be created, developed, demonstrated, and evaluated, and without regard to the type(s) of appropriated funds used. The factors which make up TAC differ for supplies versus services acquisitions. For Level I and IIIA acquisitions, these costs may include the following factors:

Hardware (+)
Software (+)
Nonrecurring production start up (+)
Contractor's program management (+)
Allowance for changes or growth

= Unit Cost

PLUS

Technical data (+)
Publications (+)
Contractor services (+)
Support equipment (+)
Training equipment (+)
Initial training

= System Cost

PLUS

<u>Initial Spares</u> Procurement Cost

PLUS

Research, Engineering & Development RE&D (+)
Test and evaluation (+)
Facility or site construction (+)
In-house contractor support services

= Total Acquisition Costs

For Level II and IIIB acquisitions these costs may include the following factors:

Technical Support Management Support Leased Services

"Transportation Acquisition Executive" (TAE) means, in the context of A-109 and this document, the Deputy Secretary.

"Transportation Systems Acquisition Review Council" (TSARC) is a group of senior officials which evaluates major acquisitions and provides advice to the TAE.

"TSARC Executive Secretary" is the Director, Office of Acquisition and Grant Management.

- D. MAJOR ACQUISITION LEVELS. Major acquisitions shall begin with KDP 1 approval and designation of a major acquisition level by the TAE. In making the designation of a level, the TAE will consider the complexity and the risks involved, as well as the dollar value using then year dollars of the acquisition, including the need for continuing direct oversight by the TAE. When the Total Acquisition Costs for programs initially estimated to be less than \$50 million exceeds this amount due to changes in quantities, cost, schedule, etc., written notification to the TSARC Executive Secretary is required to determine if it should be designated a major acquisition.
- 1. Determining factors. The TAE will make an integrated assessment of the following factors at KDP 1 to determine the appropriate level designation.
- a. For acquisitions of new or replacement items or systems/overhauls (Generally Levels I or IIIA):
 - (1) recommendation of the OA;
 - (2) technological risk (e.g. non-developmental items (NDI) versus complex development);
 - (3) impact on other OA programs;
 - (4) new requirement versus repetitive/replacement;
 - (5) intermodal implications;
 - (6) public sensitivity/visibility;
 - (7) programmatic risks;
 - (8) rough-order-of-magnitude TAC;
 - (9) need for direct oversight by TAE.
- b. For acquisitions of services (Generally Levels II
 or IIIB):
 - (1) recommendation of the OA;
 - (2) new requirement versus
 repetitive/replacement;
 - (3) intermodal implications;
 - (4) public sensitivity/visibility;
 - (5) rough-order-of-magnitude TAC;
 - (6) programmatic risks;
 - (7) need for direct oversight by TAE.
- 2. Assessment/recommendation of major acquisition level. In making a recommendation to the TAE, the AAE shall provide a written assessment based on the above factors.

3. Approval Authority.

- a. Levels I and II. Approval authority for Level I and II acquisitions will be retained by the TAE. However, at KDP 2, the TAE will reassess the level designation for a Level I or Level II acquisition based on the alternative selected.
- b. Level III. Approval authority for all KDPs for Level III acquisitions after KDP 1 will be delegated by the TAE to the AAE.

E. KDPs AND ACQUISITION PHASES.

- 1. KDPs. There are four KDPs which may be used in the acquisition process. They are:
- a. **KDP 1**. Approval of the Mission Need and approval to begin Phase 1, Concept Exploration/Alternatives Analysis.
- b. **KDP 2.** Approval to begin Phase 2, Demonstration and Validation/Acquisition Execution.
- c. **KDP 3**. Approval to begin Phase 3, Full Scale Development.
- d. $\mathtt{KDP}\ 4$. Approval to begin Phase 4, Full Production and Deployment.
- 2. **Acquisition Phases**. The acquisition phases vary based upon the level designated for the major acquisition. The following applies:
- a. Levels I and IIIA Acquisitions. There are four phases which may be applicable to Levels I and IIIA acquisitions. They are:
- (1) Phase 1, Concept Exploration, which explores alternative concepts for correcting the deficiency(ies) described in the MNS. Competitive, parallel, short term studies by the Government and/or industry will normally be used during this phase. The focus is on defining and evaluating the feasibility of alternative concepts and providing the basis for assessing the relative merits of the concepts at KDP 2.
- (2) Phase 2, Demonstration and Validation, which further develops the most promising concept(s) identified in Phase 1 and demonstrates and validates the concept(s) by developmental testing and/or simulation.
- (3) Phase 3, Full Scale Development, which further develops the concept(s) which have been successfully

demonstrated in Phase 2 into full scale prototype and/or first article units for testing. Any LRIP units are fabricated during this phase. Operational Test and Evaluation (OT&E) is conducted on production representative units to confirm that the item meets the need described in the MNS.

- (4) Phase 4, Full Production and Deployment, which produces systems and equipment for deployment into operational use. Items replaced or made obsolete by the newly deployed items are disposed of in accordance with applicable statutes and/or regulations/procedures.
- b. Levels II and IIIB Acquisitions. There are two phases which are applicable to Levels II and IIIB acquisitions. They are:
- (1) Phase 1, Alternatives Analysis, which analyzes the alternatives for correcting the deficiencies described in the MNS. The focus is on evaluating the feasibility of each alternative and providing the basis for assessing the relative merits of the alternatives at KDP 2.
- (2) Phase 2, Acquisition Execution, which develops an acquisition strategy (if not previously accomplished under Phase 1) and executes the alternative approved at KDP 2. This constitutes the last acquisition phase under Level II and IIIB acquisitions.
- F. **POLICY**. This paragraph describes general policy objectives and requirements which are to be followed in managing DOT major acquisitions.
- 1. **Objectives**. The policy objectives of this document are to achieve:
- a. An integrated management framework for translating well-justified, approved mission needs into stable, affordable acquisitions.
- b. A rigorous, event-oriented management process for acquiring quality systems, supplies and services that emphasizes sound acquisition planning, active involvement of the users/sponsors, and effective risk management by both Government and industry.
- c. A disciplined acquisition management structure and process with short, clearly defined lines of responsibility, authority, and accountability. This structure should encourage continuity of program management at each acquisition phase.

- d. Active involvement of users/sponsors in the development and evolution of operational requirements and in the planning and execution of operational testing.
- 2. **Requirements**. The policies and procedures of this document require:
- a. KDP 1 to be approved by the TAE before funds for an acquisition will be included in the OST budget request to OMB.
- b. Regular revalidation of mission need, operational requirements, and program affordability at each KDP. Affordability will be assessed in conjunction with long range resource allocation planning information.
- c. Consideration of all life cycle costs in developing realistic cost estimates for programs.
- d. Program risks to be explicitly assessed at each KDP prior to granting approval to proceed into the next acquisition phase.
- e. Accomplishment of the exit criteria as a requirement for major acquisition continuation.
- f. Realistic program schedules to be developed carefully and monitored closely to ensure that the required projections of funding needs for each fiscal year is consistent with the expected acquisition phase for each fiscal year.
 - g. Active tracking of contractor performance.
- h. A definition of requirements that begins with a well justified description of the operational deficiency in the approved MNS. Performance objectives and minimum acceptable requirements shall be developed from, and remain consistent with, the initial broad, quantitative statements of operational mission need. The proposed user/sponsor shall participate in requirements definition throughout the acquisition process.
- i. Mission requirements are to be satisfied to the maximum extent through the use of NDI (including COTS) hardware and software when such products meet user needs and are cost effective over their life cycle.
- j. Developmental testing to verify attainment of technical performance requirements and operational testing to demonstrate operational effectiveness and suitability. OT&E must be successfully completed before full production will be authorized. (Applies only to Levels I and IIIA acquisitions.)

- k. Independent oversight of OT&E to be accomplished through an organization which reports directly to the HOA (or a designee who is no lower than the AAE) and is independent of the Program Manager and users/sponsor. (Applies only to Level I and, when required by the TAE or AAE, Level IIIA acquisitions.)
- 1. Resource requirements in all program planning and acquisition documents shall be expressed in then-year dollars.

G. RESPONSIBILITIES OF KEY OFFICIALS.

1. Transportation Acquisition Executive (TAE):

- a. has general oversight responsibility for the conduct and management of DOT major acquisitions;
- b. makes the KDP 1 decision for major acquisitions and identifies the next action(s) that needs to be accomplished;
- c. designates a major acquisition as Level I, II, or III;
- d. makes subsequent KDP decisions, if applicable, approves Acquisition Plans (APs) and updates, and approves major changes for all acquisitions designated as Level I or II;
- e. delegates approval for subsequent KDPs and AP/update approval for Level III major acquisitions to the AAE following KDP 1 approval;
- f. determines at KDP 1 which Level III programs require independent oversight of OT&E;
 - g. chairs TSARC meetings; and
- h. may elect to have the Assistant Secretary for Administration assume these responsibilities for specific decisions and/or programs.

2. Assistant Secretary for Administration (ASA):

- a. implements the TAE's oversight responsibilities for the conduct and management of major acquisitions throughout DOT;
- b. serves as Vice Chair of the TSARC and makes key decisions, as appropriate, in that capacity;
- c. assumes the responsibilities of the TAE in the TAE's absence or as specified in paragraph G.1.h. above;

- d. determines whether an acquisition should be subject to these procedures; and
- e. after completion of the detailed analysis of the documentation, and if there are no issues which need to be resolved during a TSARC meeting, the ASA may waive the TSARC meeting with the concurrence of the cognizant OA.

3. Transportation Systems Acquisition Review Council (TSARC):

- a. advises the TAE regarding major acquisitions; and
- b. conducts a systematic review of the documentation provided to the TAE in support of each decision for which the TAE is responsible.

4. TSARC Executive Secretary:

- a. serves as the point of contact for all issues and documentation submitted to the TAE for information and/or action, and coordinates reviews by the TSARC members;
- b. determines if documentation submitted for TSARC
 review is adequate;
 - c. identifies issues to be raised to the TSARC;
 - d. identifies, for the approval of the TAE, any ad hoc advisors which might be necessary to assist the TSARC with identification and/or resolution of issues;
- e. prepares and distributes briefing books for the TSARC members for scheduled meetings;
- f. documents results of the TSARC meetings, prepares Acquisition Decision Memoranda or other required documentation for the TAE, and maintains a central reference file for TSARC actions; and
 - g. schedules TSARC meetings.

5. Head of Operating Administration (HOA):

- a. serves as the AAE for his/her OA (unless otherwise delegated in writing);
- b. ensures that the policies and procedures established herein are fully implemented;

- c. serves on the TSARC for major acquisitions under his/her cognizance; and
- d. establishes an AARC for OA major acquisitions, as necessary; and
- e. may retain or delegate the following functions as appropriate (however, no delegation may be lower than the AAE for items (1) through (5) below and no lower than two levels below the HOA for items (6) and (7)).
- (1) identifies OA acquisitions which are candidates for designation as major acquisitions subject to this document;
- (2) designates a Level III acquisition as a Level IIIA or a Level IIIB acquisition if not already designated by the TAE;
- (3) chairs the AARC and makes key decisions after KDP 1 for major acquisitions designated as Level III;
- (4) approves APs (and updates) for Level III designated major acquisitions;
- (5) has general oversight responsibility for the conduct and management of OA major acquisitions;
- (6) charters the Program Manager (PM) for each major acquisition covered by this document; and
- (7) determines training and experience requirements for PMs and oversees the implementation of these requirements.
- 6. Administration Acquisition Executive (AAE): serves as the OA equivalent of the TAE and performs comparable functions as delegated by the HOA.

7. Administration Acquisition Review Council (AARC):

- a. in general, performs the same functions as the TSARC, for a Level III acquisition; and
- b. performs internal OA reviews of Levels I and II acquisitions at the discretion of the AAE.

8. Major Acquisition Policy Council (MAPC):

a. convenes annually to assess changes to the DOT major acquisition process;

- b. determines whether specific policy changes may be issued by the Director, Office of Acquisition and Grant Management, or should be forwarded to the TAE for approval; and
 - c. reports directly to the TAE.

9. **PM**:

- a. manages the assigned program in a manner that is consistent with applicable statutes, regulations, directives, DOT and OA policies and procedures, and the Program Manager Charter;
- b. participates in all program decision making, and ensures that all support organization and user/sponsor organization needs and concerns are considered in all program decisions;
 - c. actively monitors contract performance;
- d. provides candid and timely assessments of program status and risk in all briefings and presentations to higher authorities; and
- e. maintains close liaison with respective budget staffs to ensure effective coordination of program and budget status.
- 10. Contracting Officer: plans, enters into, administers, and/or terminates contracts in accordance with the FAR and other applicable statutes, regulations, and directives.

11. User/Sponsor:

- a. participates in the long range planning process and mission analysis, and when required by the OA, prepares MNS;
- b. prepares and updates the Operational Requirements
 Document;
- c. actively participates in the development and execution of the TEMP; and
- d. participates in all phases of the acquisition to ensure that the item or system being acquired meets operational needs.
- 12. Independent Oversight Organization for OT&E. For Level I and IIIA acquisitions (the Independent Oversight Organization for OT&E applies to Level IIIA acquisitions only if required by the TAE or AAE):

- a. reviews and comments on the TEMP, reviews and comments on the Development Test and Evaluation (DT&E) Plan, reviews and comments on the OT&E Plan, reviews DT&E test results, observes OT&E, and makes an independent analysis of the data developed during OT&E; and
- b. provides a report on the results of the independent analysis of OT&E directly to the HOA or designee.
- H. PROGRAM CANCELLATION. Major acquisitions which have an approved MNS may only be cancelled by the TAE. Recommendations for cancellation shall be submitted through the AAE and the TSARC Executive Secretary to the TAE for a decision. Cancellation recommendations will normally be the result of changes to mission needs and/or inability to achieve the required capability within the time and cost allowed. The cancellation request shall include, as a minimum:
- 1. an explanation of the reason(s) for recommending cancellation;
- 2. costs incurred to date and estimated costs to complete the program if it is not cancelled;
 - 3. costs to be incurred as a result of cancellation;
- 4. operational impacts of cancellation and of non-cancellation;
- 5. a revised MNS detailing how the mission need has changed, or if the mission need has not changed, how the approved mission need will be met if the current program is cancelled; and
- 6. recommendations for disposal of any items developed or acquired.
- I. WAIVERS. Any requests for exceptions to this document shall be submitted through the AAE and the TSARC Executive Secretary to the TAE for a decision. The request shall contain sufficient detail to clearly explain the basis of the request, procedures sought to be waived, and any recommended alternative action.

SECTION II - MAJOR ACQUISITION PROCESS

- A. **GENERAL PRINCIPLES**. The following are general principles which underlie the criteria forming the basis for key decisions made by the cognizant acquisition executive:
- 1. Long Range Planning. Long range resource allocation planning (LRRAP) is essential to ensuring that physical and personnel requirements and fiscal constraints are integrated. Each Operating Administration (OA) shall institute a LRRAP process which will generate the information required to make the integrated assessment called for above. Each OA shall provide LRRAP information to the Transportation Acquisition Executive (TAE) annually. Additionally, at each Key Decision Point (KDP), the OA shall show the impact of an acquisition on the LRRAP information provided. Requirements for the LRRAP information are identified in Section IV.
- Mission Analysis. Each OA shall perform mission analysis on a continuing basis. Mission analysis is a focused process that assesses the ability of current assets (e.g., hardware, software, and personnel) to successfully carry out a specific, current or future mission. Mission analysis identifies capabilities needed to perform required functions, highlights deficiencies in functional capability, and documents the results of the analysis. Mission analysis should be based on the assessment of factors that affect demand on each mission area such as demographic trends, national policy and international agreements, and changes in the needs of the user. It should also be based on the continuous monitoring of performance, supportability and maintenance trends of operational systems to determine when they will no longer be able to meet current or emerging needs. Quantitative data should be used wherever possible to justify and document the conclusions of mission analysis. Working papers shall be retained within OA files.

If the mission analysis determines that: (a) there is (or will be) a functional capability deficiency; and (b) that the deficiency cannot be met with non-material solutions (such as changes to procedures, policies, or training), then a Mission Need Statement (MNS) incorporating the results of the mission analysis shall be prepared.

3. Affordability. Affordability decisions at each KDP shall consider the annual budget costs and priorities of all acquisition programs planned for the next five years (as a minimum) and the cost to benefit relationship of each individual program. Life cycle costs, including annual operation and support, shall be the basis for affordability decisions. Approval to enter the next acquisition phase of a program shall not be granted unless sufficient resources are or will be programmed to support projected development, testing, production, fielding, and support requirements.

- 4. **Test and Evaluation**. Test and evaluation is a continuing function throughout the acquisition process. The successful accomplishment of test and evaluation objectives is a critical requirement for supporting the KDP determination to commit significant resources to a program and advance a program from one acquisition phase to another.
- All Levels I and IIIA acquisitions are required to follow a disciplined test and evaluation procedure. Test and evaluation procedures for Level II and IIIB acquisitions may be instituted by the OA as appropriate. Test and evaluation shall be conducted throughout Phases 2 through 4. In the earlier phases, the purpose is to assess and reduce developmental risks and make early operational assessments. In the later phases, formal test and evaluation requirements are established. The two formal categories of test and evaluation and the objectives for each are:
- a. Developmental Test and Evaluation (DT&E). The principal objectives of DT&E are to:
- (1) assist the engineering design and development process;
- (2) verify performance objectives and requirements;
- (3) demonstrate that design risks have been minimized;
- (4) estimate the system's utility when introduced;
- (5) evaluate the compatibility and interoperability with existing or planned equipment/systems;
- (6) provide assurance that the system/equipment is ready for testing in the operational environment; and
- $\qquad \qquad (7) \quad \text{identify needed modifications or} \\ \text{improvements.}$
- b. Operational Test and Evaluation (OT&E). The principal objectives of OT&E are to conduct testing in an environment as operationally realistic as possible to:
- (1) demonstrate the operational effectiveness and suitability of the system;
- $\hbox{(2)} \quad \hbox{identify needed modifications or} \\ \hbox{improvements;} \\$

- (3) provide information on organizational and personnel requirements (e.g., qualifications and training); and
- (4) provide data to verify the adequacy of various manuals, handbooks, supporting plans and other documentation for operations, maintenance, training, logistics, etc.
- 5. Non-developmental items (NDI), including commercial-off-the shelf (COTS) items. NDI represents a potential cost-effective, time-saving, lower risk approach to meeting requirements for major acquisitions.
- (a) Throughout the acquisition process, the use of NDI shall be considered. In Phase I, the use of NDI shall be examined even though it may appear that it would not meet the preliminary or initial performance requirements as identified by the sponsoring organization. The cost to achieve marginal performance not provided by NDI shall be evaluated against the benefit that would be realized through lower cost and risk or earlier deployment to determine whether performance objectives should be adjusted to allow an NDI solution. An NDI solution does not by itself eliminate phases of the acquisition process nor should it be assumed to be the best solution. Through comparative evaluation, the use of the NDI solution must be evaluated against other feasible solutions considering such factors as life-cycle cost, schedule, risk and supportability.
- (b) If the NDI solution is expected to have a short life span, planning for a replacement item shall be initiated simultaneously with procurement of the chosen NDI solution.
- (c) Generally, COTS should not be modified since it then becomes a unique Government item that may be difficult to support or upgrade. The extent to which NDI is modified must be reflected in an appropriate developmental program complete with testing to ensure compatibility with interfacing systems and achievement of all essential operational requirements. Even if not modified, operational testing of NDI must be used to demonstrate that performance meets essential user requirements and that NDI is completely operable with other elements of the overall system where it will be used.
- (d) A maintenance philosophy must be clearly established prior to issuing any solicitation for procurement. Generally, this means that this approach is established during Phase I. The level of maintenance support must be included in the statement of work. NDI items embedded in a developmental system must be clearly identified so that support risks can be realistically assessed.

- 6. Federal Information Processing (FIP) Resources. nature of the high tech solutions and systems that the Department of Transportation acquires to meet mission needs and the sweeping definition of FIP in the Federal Information Resources Management Regulation (FIRMR), a significant portion of the acquisitions covered by this document may fall under the General Services Administration's exclusive procurement authority. Proper procurement authority, in the form of a specific or a blanket delegation of procurement authority (DPA) must be addressed during each acquisition phase. Generally, a request for a DPA will not be forwarded to GSA until the applicable KDP has been approved; however, if requested by the OA in the DPA submission to OST (M-30), the Assistant Secretary for Administration may authorize transmittal of the DPA to GSA prior to approval of the applicable KDP. Program Managers should consult with OST or OA Information Resources Management organizations and/or OA legal counsel for assistance in determining FIRMR applicability.
- B. **KEY DECISION POINT (KDP) AND PHASE.** The following applies to the charts displayed in subparagraphs 1. through 4. of this subsection:

INSTRUCTIONS RELATING TO KDPs AND ACQUISITION PHASES

- KDPs. The following subparagraphs display the requirements of the four KDPs and the related acquisition phases. Discussion of each of the KDPs is subdivided into three areas: (1) Decision Criteria which the cognizant acquisition executive will use to determine if the acquisition should proceed further; (2) Documentation required to be submitted by the OA to the cognizant acquisition executive to support the OA's request for approval of the KDP; and (3) Acquisition Decision Memorandum outlining what decisions need to be documented by the cognizant acquisition executive.
- Acquisition phases. The following subparagraphs also display the requirements for each acquisition phase. It is subdivided into two areas: (1) Objectives that should be met during the acquisition phase; and (2) Required Accomplishments during the acquisition phase. Each of these areas is cross-referenced by acquisition level to provide an easy reference for what is required for a major acquisition.
- General. Each acquisition may not need to proceed through all the KDPs and acquisition phases. Depending on the characteristics of the individual acquisition, the cognizant acquisition executive may tailor the process to permit certain key decisions or acquisition phases to be combined or skipped. Some examples, while not all inclusive, are:

- If it is demonstrated at KDP 2 or 3 that a Non-developmental item (NDI)/Commercial-off-the-shelf (COTS) item alternative best fills the need of the OA, the acquisition may be allowed to proceed directly to KDP 4.
- If it is demonstrated at KDP 2 that the alternative that best fills the need of the OA relies on existing, mature technology and does not require a technology breakthrough, then the acquisition may be allowed to skip Phase 2 and proceed directly to Phase 3.
- If it is demonstrated at KDP 1 that there is only one alternative or concept that best meets the need of the OA (most likely in a Level II or IIIB services acquisition), then the acquisition may be allowed to proceed directly to Phase 2.
- If it is demonstrated by the OA that alternative concepts have been thoroughly evaluated during Phase 1, the cognizant acquisition executive may select a single concept to be pursued during Phase 2.

The purpose of these illustrations is <u>not</u> to encourage skipping or combining steps or phases but to provide explicit recognition that acquisitions may proceed differently through the acquisition cycle. In all cases, the burden of proof is on the program manager to demonstrate that the principles and policies of this document will still be met even if phases and decision points are combined or skipped. The final determination of how an acquisition should proceed rests with the acquisition executive responsible for the applicable key decision.

TABLE INSTRUCTIONS

• The key shown below applies to the major acquisition process tables found on the following pages:

KEY:

X = Required.

Blank boxes = Not required, but may be required by the OA as determined necessary.

1. KDP 1 and Phase 1.

- a. $\mathtt{KDP}\ 1$ -- Approval of the Mission Need Statement (MNS) and approval to begin Phase 1, Concept Exploration/ Alternatives Analysis.
- (1) **Decision criteria for KDP 1.** Approval to proceed with the major acquisition will be based on the information produced in response to the questions listed below, as well as other information considered relevant by the Transportation Acquisition Executive (TAE).

DECISION CRITERIA FOR KDP 1	LEVEL I	LEVEL II	LEV IIIA	EL IIIB
Is the mission need justified?	X	Х	X	X
Can the functional deficiency described in the MNS be adequately resolved with a non-material solution?	Х	X	X	Х
Does the functional deficiency described in the MNS warrant funding?	Х	Х	Х	Х
Is the major acquisition affordable in the context of the Long Range Resource Allocation Planning (LRRAP) process?	Х	Х	Х	Х
Are there adequate resources available for Phase 1 or can they be acquired?	Х	Х	Х	Х

(2) **Documentation to be submitted for KDP 1**. The following chart lists the documentation requirements to be submitted to the TAE for KDP 1:

DOCUMENTATION FOR KDP 1	LEVEL I	LEVEL II	LEV	EL
			IIIA	IIIB
MNS	X	X	X	Х
Propose Phase 1 Proposal submission date or	Х	Х	Х	Х
Phase 1 Proposal	X	X	X	Х
Proposed exit criteria that must be satisfied before the next KDP can be approved.	Х	Х	Х	Х
Recommended major acquisition level with supporting rationale	Х	X	X	X

(3) Acquisition Decision Memorandum for KDP 1. The following chart lists the decisions for KDP 1 that must be documented in the Acquisition Decision Memorandum by the TAE (unless otherwise noted below):

ACQUISITION DECISION MEMORANDUM FOR KDP 1	LEVEL I	LEVEL II	LEVE IIIA	L IIIB
Approve the MNS and authorize program start.	Х	Х	X	Х
Designate program level.	X	X	Х*	Х*
Specify if Independent Oversight of Operational Test and Evaluation (OT&E) is required.	Х		Х	
Specify frequency of Major Acquisition Review (MAR) requirements.	Х	Х	Х	Х
Define the minimum set of concepts/alternatives to be explored.	Х	Х	Х*	Х*
Approve Phase 1 Proposal (if submitted) or	X	Х	Х*	Х*
Establish Phase I Proposal submission date	X	X	Х*	Х*
Establish exit criteria required for the next KDP decision.	Х	Х	Х*	Х*

^{*}The AAE shall prepare an Acquisition Decision Memorandum for Level III acquisitions approving the exit criteria, Phase 1 Proposal, and the concepts/alternatives to be explored.

b. PHASE 1 -- Performance of Concept Exploration/
Alternatives Analysis.

(1) <u>Objectives</u>. The objectives of Phase 1 are to:

OBJECTIVES FOR PHASE 1	LEVEL I	LEVEL II	LEV IIIA	ÆL IIIB
Explore various concepts/alternatives.	Х	Х	X	X
Define the most promising concept(s)/alternatives.	Х	Х	Х	X
Identify potential risk areas for each concept/alternative.	Х	Х	Х	Х

(2) Minimum required accomplishments for Phase 1. The following chart lists the minimum required accomplishments for Phase 1:

REQUIRED ACCOMPLISHMENTS FOR PHASE 1	LEVEL I	LEVEL II	LEVEL IIIA IIIB	
Revalidate the MNS.	X	X	X	X
Develop Phase 1 Proposal and obtain approval (if not submitted at KDP 1)	Х	Х	Х	X
Assess major strengths and weaknesses of each concept/alternative.	Х	Х	Х	Х
Evaluate Non-development items/Commercial-off-the-shelf items (NDI/COTS) as a viable technology for incorporation in the system design.	Х		Х	
Develop Acquisition Plan (AP).	Х*	Х*	Х*	Х*

^{*}May be deferred to Phase 2.

REQUIRED ACCOMPLISHMENTS FOR PHASE 1 (CONT'D)	LEVEL I	LEVEL II	LE IIIA	VEL IIIB
Designate/charter Program Manager for acquisition.	X	Х	Х	Х
Prepare an Acquisition Phase Summary	X	Х	Х	Х
Develop Acquisition Program Baseline (APB) including Appendix A	Х	Х	X	Х
Develop Life Cycle Cost Estimate (LCCE) (for the technically feasible concepts/alternatives).	х	Х	Х	Х
Develop proposed exit criteria that must be satisfied before the next KDP can be approved.	Х	Х	Х	Х
Develop and approve in accordance with Operating Administration (OA) procedures:				
Operational Requirements Document (ORD)	X		X	
Cost Benefit Analysis (CBA)	X	X	X	Х
Risk Management Plan (RMP)	X		X	
Test and Evaluation	X		X	
Master Plan (TEMP) Integrated Logistics Support Plan (ILSP)	Х		Х	

2. KDP 2 AND PHASE 2.

- a. **KDP 2** -- Approval to begin Demonstration and Validation (DemVal)/Acquisition Execution.
- (1) <u>Decision criteria for KDP 2</u>. Approval to proceed with the major acquisition will be based on the information produced in response to the questions listed below, as well as other information considered relevant by the TAE or the AAE.

DECISION CRITERIA FOR KDP 2	LEVEL I	LEVEL II	LEV IIIA	/EL IIIB
Is the mission need still justified?	Х	Х	X	X
Do the concept exploration/ alternatives analysis results support the need to continue the program?	Х	Х	Х	Х
Are one or more of the concepts/alternatives affordable in the context of the LRRAP process?	Х	X	Х	Х
Are adequate resources available for the program or can they be acquired?	Х	Х	Х	Х
Have all exit criteria established at KDP 1 been satisfied?	X	Х	Х	Х
Has the requisite documentation required for Phase 1 been approved?	Х	Х	Х	Х

(2) <u>Documentation to be submitted for KDP 2</u>. The following chart lists the documentation requirements to be submitted to the TAE (Levels I and II) and the AAE (Level III):

DOCUMENTATION FOR KDP 2	LEVEL I	LEVEL II	LI IIIA	EVEL IIIB
Revalidated MNS.	X	X	X	Х
AP.	Х*	Х*	X*	Х*
Acquisition Phase Summary.	X	X	X	X
APB including Appendix A.	X	X	X	X
LCCE.	X	X	X	Х
Proposed exit criteria that must be satisfied before the next KDP can be approved.	X		Х	

^{*}Required if developed in Phase 1.

(3) <u>Acquisition Decision Memorandum for KDP 2</u>. The following chart lists the decisions for KDP 2 that must be documented by the TAE (Levels I and II) and the AAE (Level III):

ACQUISITION DECISION MEMORANDUM FOR KDP 2	LEVEL I	LEVEL II	LE IIIA	EVEL IIIB
Approve KDP 2 and authorize entry into Phase 2 if applicable (i.e., approve revalidated MNS).	Х	X	X	X
Establish AP submission date (if AP not previously submitted). or	Х	X	Х	Х
Approve AP.	X	X	X	X
Approve APB including Appendix A.	X	Х	Х	Х
Specify frequency of MARs.	X	X		

Establish exit criteria that must be satisfied before the	Х	Х
next KDP can be approved.		

b. PHASE 2 -- DEMVAL or Acquisition Execution. DEMVAL is the term used for the Phase 2 action required for Levels I and IIIA acquisitions. Acquisition Execution is the term used for the Phase 2 actions required for Levels II and IIIB acquisitions. Each is divided by separate tables below:

(1) **DEMVAL.**

(a) <u>Objectives</u>. The objectives of Phase 2 for DEMVAL are:

OBJECTIVES OF PHASE 2 DEMVAL	LEVEL I	LEVEL IIIA
Further define the critical design characteristics and expected capabilities of the approved concept(s)/alternative(s).	X	Х
Demonstrate that the technologies critical to the most promising concept(s)/alternative(s) can be incorporated into system design(s) with confidence.	X	Х
Ascertain that the processes (e.g., manufacturing) critical to the most promising concept(s)/alternative(s) are understood and attainable.	X	Х
Reduce risk and mature the system design in preparation for Phase 3.	Х	X

(b) Minimum required accomplishments for Phase 2, $\underline{\text{DEMVAL}}.$ The following chart lists the minimum required accomplishments for Phase 2:

REQUIRED ACCOMPLISHMENTS FOR PHASE 2 DEMVAL	LEVEL I	LEVEL IIIA
Revalidate the MNS.	X	X
Identify major trade-off opportunities for cost, schedule, and performance.	X	Х
Perform tests to identify technologies or integration requirements which pose a risk.	Х	X
Assess industrial capability to support the program.	Х	Х
Evaluate NDI/COTS as a viable technology for incorporation into system design.	Х	Х
Develop AP (if not already developed)	Х	X
and Obtain approval of AP (if not already approved)	Х	Х
Update AP for next phase.	X	X
Prepare an Acquisition Phase Summary.	Х	Х
Update APB (if required) and Appendix A.	X	Х
Update LCCE.	X	Х
Develop proposed exit criteria that must be satisfied before the next KDP can be approved.	Х	X
Update and approve in accordance with OA procedures (if required): ORD CBA RMP TEMP ILSP	X X X X X	X X X X X

(2) Acquisition Execution.

(a) $\underline{\text{Objectives}}.$ The objectives of Phase 2 Acquisition Execution are:

OBJECTIVES FOR PHASE 2 ACQUISITION EXECUTION	LEVEL II	LEVEL IIIB
Develop an acquisition approach (if not already accomplished) to implement approved concept/alternative.	Х	Х
Execute approved concept/alternative.	X	X

(b) <u>Minimum required accomplishments for Phase 2,</u> <u>Acquisition Execution</u>. The Phase 2 minimum required accomplishments for Acquisition Execution are:

REQUIRED ACCOMPLISHMENTS FOR PHASE 2 ACQUISITION EXECUTION	LEVEL II	LEVEL IIIB
Develop AP (if not already developed) and	X	Х
Obtain approval of AP (if not already approved)	X	Х
Review AP annually and update as required.	Х	X
Execute approved acquisition concept/alternative.	Х	X
Review APB (including Appendix A) annually and update as required.	Х	X

3. KDP 3 AND PHASE 3.

- a. KDP 3 -- Approval to begin Full Scale Development.
- (1) <u>Decision criteria for KDP 3</u>. Approval to proceed with the major acquisition will be based on the information produced in response to the questions listed below, as well as other information considered relevant by the TAE or the AAE.

DECISION CRITERIA FOR KDP 3	LEVEL I	LEVEL IIIA
Is the mission need still justified?	X	X
Do tests and demonstrations to date provide support that the technologies and processes critical to success are attainable and risks have been identified?	X	Х
Is the proposed concept/alternative affordable in the context of the LRRAP process?	Х	Х
Are adequate resources available for the major acquisition or can they be acquired?	Х	Х
Have all exit criteria established at KDP 2 been satisfied?	X	X
Has the requisite documentation for Phase 2 been approved?	Х	X

(2) <u>Documentation to be submitted for KDP 3</u>. The following chart lists the documentation requirements to be submitted to the TAE (Level I) and the AAE (Level III):

DOCUMENTATION FOR KDP 3	LEVEL I	LEVEL IIIA
Revalidated MNS.	X	X
Updated AP.	X	X
Acquisition Phase Summary.	X	X
Updated APB (if required) and Appendix A.	X	X
Updated LCCE.	Х	X
Proposed exit criteria that must be satisfied before KDP 4 can be approved.	X	X

(3) <u>Acquisition Decision Memorandum for KDP 3</u>: The following chart lists the decisions for KDP 3 that must be documented by the TAE (Level I and II) and the AAE (Level III):

	ACQUISITION DECISION MEMORANDUM FOR KDP 3	LEVEL I	LEVEL IIIA
	Approve KDP 3 and authorize entry into Phase 3 (i.e., approve revalidated MNS).	Х	Х
	Approve updated AP.	Х	X
I	Approve updated APB (if required) and Appendix A.	X	X
-	Specify low-rate-initial-production (LRIP) quantities.	X	X
	Specify if TSARC must authorize LRIP.	Х	
	Specify frequency of MARs.	Х	
	Establish exit criteria that must be satisfied before KDP 4 can be approved.	X	X

- b. **PHASE 3** -- Full Scale Development. Full Scale Development applies to Level I and IIIA major acquisitions.
 - (1) <u>Objectives</u>. The objectives of Phase 3 are to:

OBJECTIVES OF PHASE 3 FULL SCALE DEVELOPMENT	LEVEL I	LEVEL IIIA
Translate the most promising design approach developed in Phase 2 into a stable, producible, and cost-effective system design.	Х	Х
Demonstrate the manufacturing or production process.	X	X
Demonstrate that the system capabilities meet contract specifications and minimum acceptable operational performance requirements and satisfies the mission need.	Х	Х

(2) <u>Minimum required accomplishments for Phase 3 Full Scale Development</u>. The following chart lists the minimum required accomplishments for Phase 3:

REQUIRED ACCOMPLISHMENTS FOR PHASE 3 FULL SCALE DEVELOPMENT	LEVEL I	LEVEL IIIA
Revalidate the MNS.	X	X
Evaluate NDI/COTS as a viable technology for incorporation into system design.	X	X
Update the AP.	X	X
Prepare the Acquisition Phase Summary.	X	X
Successfully complete OT&E and obtain results under conditions as operationally realistic as possible.	Х	Х
Provide OT&E results to the Independent Oversight Organization.	Х	Х*

^{*}If required by the TAE at KDP 1.

REQUIRED ACCOMPLISHMENTS FOR PHASE 3 FULL SCALE DEVELOPMENT (CONT'D)	LEVEL I	LEVEL IIIA
Achieve LRIP success (if applicable) and: Verify the adequacy of the manufacturing or production process. Confirm the stability and producibility of the design. Provide a realistic estimate of production costs.	Х	Х
Update APB (if required) and Appendix A.	X	X
Update LCCE.	X	Х
Update and approve in accordance with OA procedures (if required): ORD CBA RMP TEMP ILSP	X X X X X	X X X X X

4. KDP 4 AND PHASE 4.

- a. $\ensuremath{\mathtt{KDP}}$ 4 -- Approval to begin Full Production and Deployment.
- (1) <u>Decision criteria for KDP 4</u>. Approval to proceed with the major acquisition will be based on the information produced in response to the questions listed below, as well as other information considered relevant by the TAE and the AAE.

DECISION CRITERIA FOR KDP 4	LEVEL I	LEVEL IIIA
Is the mission need still justified?	X	X
Do test results and (if applicable) low- rate initial production show that the design is stable and producible, that the system meets the appropriate operational requirements and has the potential to be operationally effective and suitable?	Х	Х
Is the major acquisition affordable in the context of the LRRAP process?	X	X
Are adequate resources available for the major acquisition or can they be acquired?	Х	Х
Have all exit criteria established at KDP 3 been satisfied?	X	X
Has the requisite documentation required for Phase 3 been approved?	X	X

(2) <u>Documentation to be submitted for KDP 4</u>. The following chart lists the documentation requirements to be submitted to the TAE (Level I) and the AAE (Level III):

DOCUMENTATION FOR KDP 4	LEVEL I	LEVEL IIIA
Revalidated MNS.	X	X
Updated AP.	X	X
Acquisition Phase Summary.	X	X
Independent Oversight Organization's OT&E report.	X	X
Updated APB (if required) and Appendix A.	X	Х
Updated LCCE.	X	Х

(3) <u>Acquisition Decision Memorandum for KDP 4</u>. The following chart lists the decisions for KDP 4 that must be documented by the TAE (Level I) and the AAE (Level III):

ACQUISITION DECISION MEMORANDUM FOR KDP 4	LEVEL I	LEVEL IIIA
Approve KDP 4 and authorize entry into Phase 4 (i.e., approve revalidated MNS).	X	X
Approve updated AP and specify requirements for future AP updates.	X	X
Approve updated APB (if required) and Appendix A.	X	X
Specify frequency of MARs.	X	

b. PHASE 4 -- Full Production and Deployment

(1) $\underline{\text{Objectives}}$. The objectives for Phase 4, Full Production and Deployment are:

OBJECTIVES OF PHASE 4 FULL PRODUCTION AND DEPLOYMENT	LEVEL I	LEVEL IIIA
Establish a stable, efficient production and support base.	Х	X
Achieve an operational capability that satisfies the mission need.	X	X
Conduct follow-on testing to confirm and monitor performance and quality and verify correction of deficiencies.	Х	Х
Logistics are in place to support items.	Х	X

(2) Minimum required accomplishments for Phase 4. The following chart lists the minimum required accomplishments for Phase 4:

REQUIRED ACCOMPLISHMENTS FOR PHASE 4 PRODUCTION AND DEPLOYMENT	LEVEL I	LEVEL IIIA
Produce and deploy items and/or systems.	X	X
Execute operational and support plans, including transition from contractor to in-house support if applicable.	Х	Х
Update AP, if necessary.	X	X
Update APB (if required) and Appendix A.	X	Х
Maintain as necessary in accordance with OA procedures: ORD CBA RMP TEMP ILSP	X X X X X	X X X X X

C. PROGRAM MANAGEMENT.

1. Acquisition Program Baseline (APB). An APB is required for all acquisitions. The APB establishes the "top level" requirements that are critical to the program's success and is designed to enhance program stability and control costs. The APB is established at KDP 2 and sets the cost, schedule and performance critical requirements for the remaining phases of the overall program and includes an Appendix A which sets a cost baseline for the upcoming phase of the program. See Section IV, Acquisition Program Baseline for further detail on the APB.

a. Changes to the baseline(s).

- (1) Baseline changes caused by factors other than a Baseline Breach. Baselines may be modified as the result of programmatic changes dictated by Congressional direction, the desire to incorporate new and more beneficial technologies, and/or changes in user/sponsor requirements, etc. which create a change to the performance, cost, and/or schedule parameters.
- (2) Baseline changes caused by a Baseline Breach. A breach of the baseline occurs if the threshold for the performance parameters cannot be achieved, or the range(s) for cost or schedule is exceeded.

b. Reporting.

- (1) Whenever a Program Manager (PM) believes that an unfavorable trend has developed within the program such that, left untreated, a baseline breach <u>will</u> occur, or whenever programmatic changes require a modification to the program's current parameters, and/or the costs associated with the upcoming phase, the PM will prepare a deviation report for the program and/or the phase as applicable (see Section IV, Documentation, for a discussion on Program/Phase Deviation Reports). The deviation report shall:
- (a) address the baseline parameter(s) that will no longer be achieved, the reasons they will not be achieved, and, for a baseline breach, the proposed steps being taken to address the problems identified.
- (b) have attached the proposed change showing the last approved baseline(s), the proposed new baseline(s), and the reason for the change with its impact on the program.
 - (c) be submitted to the AAE.

- (2) Whenever a PM believes that an unfavorable trend has developed within the program such that, left untreated, a baseline <u>breach could</u> occur, the PM should notify the AAE in writing. Potential baseline breaches and their resolution shall be addressed at the next Major Acquisition Review to keep the cognizant acquisition executive apprised of program progress and to request assistance in solving program problems as necessary.
- (3) Within 60 days of the deviation report receipt, the AAE shall notify the TAE of the change, reason for the change, and, for a breach, any proposed corrective action.

 Included with the notification will be a copy of the deviation report and a proposed revision to the APB.
 - c. Revised Baseline Approval. A decision on a request for a change to the baseline(s) shall be made by the TAE (Level I and II acquisitions) or the AAE (Level IIIA and IIIB acquisitions) within 30 days after receipt of the request.
 - 2. Contract Performance Measurement. Reporting of contract cost and schedule performance shall be required for all major acquisitions except those using firm-fixed-price contracts or firm-fixed-price with economic price adjustment contracts. The PM shall select the appropriate cost and schedule measurement system to be utilized for the acquisition in accordance with OA procedures. The type of contract performance measurement data to be obtained shall be addressed in the AP for each program. Whenever possible, the contractor's existing system of tracking cost and schedule shall be used. The contractor's performance reporting management system must produce data that:
 - a. relate time-phased budgets to specific contract tasks and/or statements of work;
 - b. indicate work progress;
 - c. properly relate cost, schedule, and technical
 accomplishment;
 - d. are valid, timely and auditable;
 - e. supply information at a practical level of summarization; and
 - f. are derived from the same internal management control systems used by the contractor to manage the contract.

3. Major Acquisition Reviews (MAR)

- a. During each acquisition phase, the OA shall provide periodic MARs for TSARC members and their staffs. MARs may be held separately or combined with internal OA reviews. The MARs are required for each Level I and II acquisition and for those Level III acquisitions specified by the TAE. The frequency of the MARs shall be specified by the TAE in the Acquisition Decision Memorandum for each KDP.
- b. The purpose of a MAR is to have the Program Manager provide attendees with a complete and current status of the program. While the format for the MAR may be in accordance with OA procedures, the following information should be addressed at some time during the briefing or in the briefing material provided to the attendees:
- (1) <u>Program Summary</u>. The mission of the program (what capability it will provide, what problem it will solve and who is the sponsor/user organization) should be clearly described. The quantity of systems/equipment to be acquired, if known, should be identified. The current acquisition phase of the program, when the previous KDP was approved, and when approval will be sought for the next KDP should be included.
- (2) <u>Achievements since last MAR</u>. The MAR should highlight significant progress since the last MAR and identify the status of any action items.
- (3) <u>Performance</u>. The briefing should summarize technical, cost, and schedule performance status/progress against the approved APB. Potential baseline changes should be discussed.
- (4) <u>Documentation status</u>. The briefing should provide the planned and actual delivery date for each document or update required in Section II herein. The Program Manager should address any issues preventing the on-time completion of a document as well as any potential impact on the program.
- (5) <u>Risk Assessment</u>. A summary should be provided which shows the assessment of overall programmatic risks for technical, schedule, and cost and an explanation of that assessment.
- (6) <u>Total Program Schedule</u>. The initial and current schedule for the program should be provided, with all KDPs and key program events identified. Any important events required in the next six months should be highlighted.

- (7) <u>Program Funding</u>. The briefing should include the funding history and projections for the program, covering R&D funds, acquisition (e.g. F&E; AC&I) funds, and operations funds. This should include a comparison of the budgeted amounts to current estimates, identifying funding surplus or shortfall for each fiscal year.
- (8) <u>Contract Information</u>. All funding information for each active contract should be identified, showing the original and current contract amounts. A status of all undefinitized actions and key option exercise dates should be included.
- (9) <u>Concerns or Key Issues</u>. The Program Manager should identify and describe each important technical, cost, and schedule concern that has surfaced in the program and remains unresolved. There should be a discussion on the impact the concern has, or might have, on program execution and/or funding.
- (10) <u>Action Items</u>. At the conclusion of the MAR, the Program Manager should summarize any action items for tracking and discussion at future MARs.

SECTION III - TRANSPORTATION SYSTEMS ACQUISITION REVIEW COUNCIL (TSARC) PROCEDURES

- A. **PURPOSE**. The Transportation Systems Acquisition Review Council (TSARC) is an advisory body for the Transportation Acquisition Executive (TAE) on major acquisitions. The TSARC shall meet on a regularly scheduled basis, and at other times when directed by the TAE. At a minimum, the TSARC shall convene at KDP 1 for all major acquisitions and at subsequent KDPs for Levels I and II acquisitions to review the program documentation and advise the TAE on appropriate action to be taken.
- B. TSARC MEMBERS. The TSARC consists of the members shown below: (Principals may be represented by their deputies except the Assistant Secretary for Administration (ASA) cannot be represented by his/her Deputy when the Deputy Secretary is not present.) In the absence of or in consultation with the TAE, the ASA may make key decisions.
 - 1. The Deputy Secretary (Chairperson);
 - 2. Assistant Secretary for Administration (Vice Chair);
 - 3. Assistant Secretary for Budget and Programs;
 - 4. Assistant Secretary for Policy and International Affairs;
 - 5. General Counsel; and
 - 6. Head of the Operating Administration requesting the action.
 - C. TSARC SUPPORT. The Director, Office of Acquisition and Grant Management, shall be the TSARC Executive Secretary. Special advisors may be called upon to assist the TSARC, as deemed necessary by the Chair.
 - D. **SCHEDULE**. The TSARC will meet on a regularly scheduled basis (generally monthly) to review:
 - 1. Mission Need Statement (MNS) at Key Decision Point (KDP) 1 for all acquisitions covered by this document;
 - 2. KDPs 2-4 for all Level I acquisitions and KDP 2 for Level II acquisitions;
 - 3. Acquisition Plans (APs) for Levels I and II acquisitions; and
 - 4. Other issues when directed by the TAE.

E. TSARC MILESTONES. The TSARC review will adhere to a strict milestone schedule as follows:

T minus 45 days - Documentation (i.e., MNS, AP, etc.) received by TSARC Executive Secretary from the OA;

T minus 38 days - TSARC Executive Secretary publishes agenda for upcoming TSARC;

T minus 30 days - Comments on Operating Administration (OA) submittal due from the TSARC members;

T minus 28 days - TSARC comments forwarded to OA;

T minus 20 days - Responses from the OAs to the TSARC comments due to TSARC Executive Secretary;

T minus 10 days - the TSARC presentations from OAs due in hard copy to the TSARC Executive Secretary with a list of the principal attendees from the OA to the TSARC Executive Secretary;

T minus 7 days - Briefing books due to TSARC members;

T - TSARC meeting held; and

T plus 5 days - Decision memorandum issued by TAE.

Once an item has been placed on the TSARC agenda (i.e., the request has been officially submitted at T minus 45), it will be discussed at the TSARC meeting as planned unless it has been determined by the TSARC Executive Secretary that the documentation submitted is deficient thereby warranting its return. If the determination is made to return the documentation, the TSARC Executive Secretary will notify the OA within 10 days of receipt by the TSARC. If comments and/or responses have not been received in accordance with the above schedule, the TSARC, when it convenes, will assess whether the information provided is adequate to proceed.

Normally, there will be a working meeting between the TSARC staff and the OA staff at T minus 30 to discuss comments of the TSARC members. Additional working meetings may be called at other times in the process on an as-needed basis.

The Chair may also schedule extra TSARC sessions or follow-up meetings if required.

F. TSARC BRIEFING BOOKS. The TSARC briefing books are prepared by the TSARC Executive Secretary to provide all the relevant documentation needed for the TSARC meetings.

They also document the TSARC review process, including, as a minimum:

- 1. the identification of decisions required at the upcoming TSARC meetings;
 - 2. the status of prior TSARC direction for a program;
- 3. unresolved issues and issues where general consensus has been reached; and
- 4. the impact of various decision alternatives which were identified during the TSARC documentation review process.
- G. TSARC PRESENTATION FORMATS. The TSARC agenda will normally include more than one program at each session. The OA presentation should be limited to about 15 minutes without questions. The presumption is that all participants in the TSARC meeting will be familiar with the program and issues. Extensive program history shall not be presented at the TSARC presentation except where it is directly related to an issue requiring TAE decision. If additional time will be required, the OA should advise the TSARC Executive Secretary no later than 10 days before the TSARC so the agenda may be adjusted appropriately. Attendance at the TSARC shall be limited to principals, briefers and essential staff.

The OA presentation shall follow the format for the appropriate category as described below. Briefings which do not fall into these categories should be structured to provide the same types of information. The three basic formats and the topics to be addressed (on separate briefing charts) are:

1. KDP 1. (15 minutes maximum)

- a. <u>Decision Requested</u> State the decision(s) requested such as: approval of the MNS, program designation, and authorization to proceed to the next logical phase.
 - b. <u>Mission Need</u> Address mission deficiency in broad functional terms.
 - c. <u>Current Capability</u> Explain how current capability is not meeting the mission need.
 - d. <u>Planned Capability</u> Discuss planned capability in functional (not programmatic) terms.
 - e. <u>Alternative Approaches</u> Discuss what alternatives will be considered to satisfy this need.

- f. <u>Resource Requirements</u> Explain the relationship to alternatives and the Long Range Resource Allocation Plan (LRRAP), and what is included in the estimate.
 - g. Acquisition Strategy Objectives.
- h. <u>Phase 1 Proposal</u> Discuss the Phase 1 Proposal including proposed cost, schedule, and acquisition strategy for Phase 1 (if applicable).
 - i. Key Issues.
 - j. Recommended Program Level.
 - k. Proposed Exit Criteria.
 - 2. KDPs 2 through 4. (15 minutes maximum)
- a. <u>Decision Requested</u>. State the decision(s) requested such as: approval to enter into the next acquisition phase; request reassessment of program designation.
 - b. <u>Mission Need</u> Revalidate MNS or explain changes requested.
 - c. <u>Current Program Status</u> Discuss where the program stands relative to the Exit Criteria established at the prior KDP.
 - d. <u>Results of previous phase activities</u> Discuss the results of the previous phase activities including technical capabilities, technical risk, schedule, life cycle cost estimates, cost benefit analyses, testing, etc.
 - e. Acquisition strategy for the next phase.
 - f. <u>Program Risk</u> Explain what the program risks are (cost, schedule, and technical) and how they are being addressed.
 - g. <u>Total Program Funding Requirements</u> Identify any funding deficiencies (if applicable).
 - h. <u>Affordability</u> Discuss supportability, cost drivers, major trade-offs and the relationship to LRRAP.
 - i. <u>Acquisition Program Baseline (APB)</u> Identify the key parameters to be included in the baseline for cost, schedule, and performance (if applicable).

- j. <u>Next KDP</u> Discuss where the program is going and what events, including testing, will occur prior to the next KDP (if applicable).
 - k. <u>Proposed Exit Criteria</u> (if applicable).
 - 1. <u>Key Issues</u>.
 - 3. AP Approval. (15 minutes maximum)
- a. <u>Decision Requested</u> Provide a short program description and the decision requested.
- b. <u>Current Status of Program</u> Describe the acquisition strategy and the results of that strategy which brought the program to its present point.
- c. <u>Proposed Contracting Strategy</u> Discuss competition, contract type, contractor performance measurement.
- d. <u>Acquisition Strategy Goals and Objectives</u> Address logistics support, configuration management, training, and test and evaluation.
- e. <u>Total Program Funding Requirements</u> Identify funding required for proposed acquisition strategy.
 - f. <u>Key issues</u>.

SECTION IV - DOCUMENTATION

This documentation section includes the primary documents discussed in the major acquisition process outlined in Section II. Each document is divided into five paragraphs: Purpose, Prescription, Approval, Distribution, and Contents. All documents which are to be submitted to the TAE shall be transmitted through the TSARC Executive Secretary.

ACQUISITION DECISION MEMORANDUM

- 1. **PURPOSE.** The purpose of the Acquisition Decision Memorandum (ADM) is to document the decisions of the cognizant acquisition executive and specify any conditions for performance during the next phase.
- 2. **PRESCRIPTION.** The ADM is to be prepared after each TSARC or AARC review.

3. APPROVALS.

- a. KDP 1 ADMs shall be issued by the TAE. For Level III acquisitions, the AAE may choose to issue a follow-on ADM addressing exit criteria, Phase I Proposal, etc.
- b. KDP's 2-4 ADMs shall be issued by the TAE for Levels I and II acquisitions and by the AAE for Level III acquisitions.

4. DISTRIBUTION.

- a. ADMs issued by the TAE shall be forwarded to the TSARC members and the AAE.
- b. One copy of all ADMs issued by the AAE shall be forwarded to the TSARC Executive Secretary within 10 days of AAE approval.
- 5. **CONTENTS.** The contents shall be in accordance with items in the ADM charts under Section IIB of this document for each applicable KDP.

ACQUISITION PHASE SUMMARY

- 1. **PURPOSE**. The purpose of the Acquisition Phase Summary is to provide an executive summary of the results of the previous acquisition phase activities.
- 2. **PRESCRIPTION**. The Acquisition Phase Summary shall be submitted at each KDP, beginning with KDP 2.
- 3. **APPROVAL**. The Acquisition Phase Summary is an informational document requiring no formal approval.
- 4. **DISTRIBUTION**. One copy of the Acquisition Phase Summary shall be submitted to the TAE via the TSARC Executive Secretary for Levels I and II acquisitions. One copy, if requested by the TAE, shall be submitted for Level III acquisitions.
 - 5. **CONTENTS**. The format shall be in accordance with OA procedures. The contents of the Acquisition Phase Summary will vary with each KDP. The Acquisition Phase Summary shall:
 - a. Include an executive summary of the results of the required activities for the current acquisition phase. All activities for the acquisition phase identified in the Required Accomplishments chart in Section IIB of this document must be addressed.
 - b. Address the exit criteria established at the previous KDP and how they were or were not satisfied.
 - c. Include a written summary of the critical test results for the preceding acquisition phase for KDPs 3 and 4.

ACQUISITION PLAN (AP)

- 1. **PURPOSE**. The purpose of an AP is to establish a disciplined, formally documented planning procedure for DOT major acquisitions. The AP is to address all known procurements associated with the major acquisition.
- 2. **PRESCRIPTION**. APs are required for all major acquisitions at or within 6 months after approval of KDP 2 as follows:
- a. Initial AP. The initial AP must be approved prior to the release of a synopsis under FAR 5.2; issuance of a solicitation (draft or otherwise); transfer of funds within or outside DOT; or any other such action unless otherwise authorized by the Assistant Secretary for Administration. However, preliminary acquisition efforts (e.g., defining requirements; issuing market search synopses and draft specifications or statements of work; preparing, but not releasing, draft solicitations) may be performed before acquisition planning is completed. APs for all acquisitions shall be submitted, at the OA's discretion, either at KDP 2 or within six months after KDP 2 approval.
- b. AP Updates. APs shall be reviewed at least once every twelve months (see paragraph 3.d. below). APs shall be updated: (1) when a significant change to the approved AP is contemplated (e.g., a new requirement, change in existing requirements, and/or change in acquisition strategy including contact type, cost growth); and (2) at each KDP.

APPROVALS.

- a. APs and updates for Level I and II acquisitions shall be endorsed by the AAE and approved by the TAE.
- b. APs and updates for Level IIIA and IIIB acquisitions shall be approved by the AAE.
- c. As part of the endorsement/approval of the AP, the AAE is responsible for ensuring that all requisite signatures as specified in the Federal Acquisition Regulation and OA procedures have been obtained.
- d. When APs are reviewed annually to determine if an update is required (see paragraph 2.b. above) and it is determined that the current AP requires no change, the Program Manager shall certify to the AAE or designee that the information contained in the AP is accurate and complete and that no change is required.

4. DISTRIBUTION.

The following distribution applies to APs and any updates:

- a. for Levels I and II acquisitions One copy of all APs and updates shall be submitted to the TAE via the TSARC Executive Secretary.
- b. for Levels IIIA and IIIB acquisitions One copy of all APs and updates shall be submitted to the TSARC Executive Secretary within 10 working days of the AAE approval.
 - c. for All Levels One copy of the program manager's certification shall be submitted to the TSARC Executive Secretary within 10 working days after the review is completed and the determination is made that no changes are required.

5. **CONTENTS**.

- a. APs shall contain the applicable information in FAR 7.105 including addressing all planned procurements associated with the major acquisition. Each caption within FAR 7.105 is to be inserted in the AP. If a particular caption does not apply, the words "not applicable" shall be inserted after the caption.
- b. When updates to the initial AP are provided, each revised page shall indicate the revision number and date on the bottom (e.g., "Revision 1, Oct. 1, 1992" indicates the first revision submitted on October 1, 1992) and contain an indicator (bar) on the side of the page to identify the change.
- c. The AP must include a cover page which identifies the acquisition(s) covered and level designation and includes a signature block for the OA approving official. Other signatures on the cover page shall be in accordance with OA procedures. The OA approving official's signature on a transmittal memo does not meet this requirement.
- d. In the AP, the OAs shall briefly summarize the key points and the status of the following documents in the sections identified below, as appropriate:
 - (1) LCCE (7.105(a)(3)(i));
 - (2) ORD (7.105(a)(4));
 - (3) RMP (7.105(a)(7));
 - (4) Contractor Performance Measurement (7.105(b)(9));

- (5) TEMP (7.105(b)(11));
- (6) ILSP (7.105(b)(12)); and
- (7) LRIP (required when updating the AP for KDP 3 include the need for LRIP and the proposed quantity and rationale for the quantity chosen) (7.105(b)(17)).
- d. In addition to the requirements of FAR 7.105, OAs shall address the following in their respective FAR paragraphs:
 - (1) CBA (7.105(a)(3));
 - (2) DPA request (7.105(b)(18)).

ACQUISITION PROGRAM BASELINES (APB)

- 1. **PURPOSE**. The APB provides quantified ranges for critical performance, cost and schedule parameters throughout the phases of the acquisition program and includes an Appendix A which provides a quantified range for costs associated with an upcoming phase beginning with Phase 2. The purposes of the APB are to: enhance program stability, control costs, and provide a reference point for measuring and reporting the status of program implementation.
- 2. PRESCRIPTION. The APB shall initially be developed by the Program Manager during Phase 1 for all acquisitions and submitted in support of KDP 2. The Program Manager may allow trade-off adjustments within the performance, cost, and schedule parameters, as long as the baseline is not breached or the parameter(s) exceeded. During each phase of the acquisition, the Program Manager shall maintain a record of the current status of the baseline parameters to identify and/or control baseline changes or potential baseline breaches. The APB shall be updated as necessary by the Program Manager except for Appendix A which is to be updated at each KDP or annually for Level II and IIIB acquisitions. If the APB is updated to only reflect changes to the cost associated with an upcoming phase, only Appendix A to the APB shall be submitted.
- 3. APPROVAL. APBs shall be approved by the TAE (for Level I and II acquisitions) or by the AAE (for Level IIIA and IIIB acquisitions).
- 4. **DISTRIBUTION**. One copy of the APB shall be submitted to the:
 (a) TAE (for Level I and II acquisitions); and (b) TSARC
 Executive Secretary for Level IIIA and IIIB acquisitions.
 - 5. **CONTENTS**. Attachment 1 shall be the format used for the initial APB (including Appendix A) submission and updates including baseline changes or breaches. When Attachment 1 is updated, the columns identifying the original values and all previous changes shall be maintained. Attachment 2 shall be used to endorse any baseline changes.
 - a. **Performance**. Performance parameters are the top level critical requirements derived directly from the Operational Requirements Document. All parameters listed shall contain a threshold and an objective.
 - (1) A performance parameter's threshold is the minimum value necessary to provide an operational capability that will satisfy the mission need.

- (2) A performance objective is a value beyond the threshold that should reflect an operationally meaningful, measurable, cost-effective, affordable, impact on operations or support beyond that provided by the threshold value. The objective for performance could be either higher or lower than the threshold value, depending on what will be measured. (For example, a system's minimum value may be to withstand a temperature of 20 degrees and its objective may be to withstand a temperature of 5 degrees. The 5 degree objective, even though numerically less than the threshold value, is better than the 20 degree minimum value). In some cases the threshold and objective could be the same.
- b. <u>Cost</u>. There shall be a cost range for the overall program and for the upcoming phase of the program beginning with Phase 2. All parameters listed under cost shall contain a range of values that can be reasonably expected. The range shall be derived from the TAC. The range for cost is to reflect the best estimate for meeting the performance and schedule parameters and is based on different probabilities of success. The range shall be supportable, consistent with, and easily reconciled to, other cost estimates prepared for the program.
- c. <u>Schedule</u>. All parameters listed under schedule shall contain a range. The range for each schedule parameter consists of a period of time (stipulated by dates) for which a key event (such as a KDP review, design review, or completion of a test activity) is likely to occur.

PROGRAM XXX ACQUISITION PROGRAM BASELINE (FORMAT)

CRITICAL <u>PARAMETER</u>	THRESHOLD	OBJECTIVE	CHANGE #/ KDP #	*
Approved: _	MM/DD/YY			
SECTION A:	PERFORMANCE			
	w in tabular form p and thresholds must		e information.	
REFERENCE:	Operational Requir	ements Document da	ted	•

List critical performance parameters with quantified threshold and objectives that must be met to meet mission needs. Performance objectives and thresholds will be derived from the ORD, and both thresholds and objectives must be entered. Performance includes operational, technical, and supportability parameters such as:

Accuracy Speed
Range Gross weight
Availability Reliability
Maintainability Transportability
Compatibility Interoperability
Altitude Crew Size

*If the baseline is changed, insert a column entitled, "Change # _____/KDP #____" and list the change(s) under this columnar heading. A new column must be added each time the APB is changed.

For all changes caused by a breach, insert the word "Breach" directly after the parameter change.

When the APB is updated to reflect changes in the baseline, previous columns will not be revised to reflect actual results or changes in events.

Attachment 1 APB Formats

SECTION B: COST

Approved: <u>MM/DD/YY</u>

Overall Program

Then Year \$**

Total RDT&E

Total Acquisition

Total Quantities:**

Enter a total cost range (by Then Year dollars in millions) using the TAC as a baseline. Cost data reflected in the baseline must select realistic cost estimates, but may not exceed the amounts in the LCCE. The basis for cost ranges must be defined.

After it is determined, enter a reasonable and supportable range of the total quantity to be acquired. In early phases, quantity ranges are to reflect the best estimate available.

*If the baseline is changed, insert a column entitled, "Change # _____/KDP #____" and list the change(s) under this columnar heading. A new column must be added each time the APB is changed.

For all changes caused by a breach, insert the word "Breach" directly after the parameter change.

When the APB is updated to reflect changes in the baseline, previous columns will not be revised to reflect actual results or changes in events.

** For information only. There are no deviation criteria for these values.

DECITOR C.	SCHEDOLL (SHEET)	
Approved: _	MM/DD/YY	
CRITICAL <u>EVENTS</u>	<u>RANGE</u>	CHANGE #* <u>KDP</u> #

List the most critical dates (as a range) including KDPs, key test and evaluation dates, contract awards, first deployments, and other significant program dates. The following are illustrative examples only:

KDP 2
DEM/VAL contract award
Mock-up/bread board complete
KDP 3
Full scale development
 contract awarded
First article/prototype
 built
DT&E complete
LRIP contract awarded

SECTION C. SCHEDILE (DATES)

First delivery
OT&E (start -- complete)
KDP 4
Production contract
 awarded
Initial operational
 capability/operational
 readiness date
Operational Support Date
Final Delivery

*If the baseline is changed, insert a column entitled, "Change # _____/KDP #_____" and list the change(s) under this columnar heading. A new column must be added each time the APB is changed.

For all changes caused by a breach, insert the word "Breach" directly after the parameter change.

When the APB is updated to reflect changes in the baseline, previous columns will not be revised to reflect actual results or changes in events.

APPENDIX A

COST BASELINE FOR UPCOMING PHASE

Phase (enter phase no.)

Then Year
Total RDT&E
Total Acquisition

Total Quantities: **

Enter a total cost range (by Then Year dollars in millions) for the applicable phase using the TAC as a baseline. The basis for cost ranges must be defined.

*If the baseline is changed, insert a column entitled, "Change # _____/KDP #_____" and list the change(s) under this columnar heading. A new column must be added each time the cost baseline is changed.

For all changes caused by a breach, insert the word "Breach" directly after the change.

**For information only. There are no deviation criteria for these values.

AAE ENDORSEMENT OF BASELINE CHANGE

(FORMAT)

Subject: (Insert name of program) Baseline Change Request and Deviation Report

(Insert name of program) requires a change to its current approved baseline, dated MM/DD/YY, for the following reasons. (Give reasons for the change and the impact on the program). Program Deviation Report of the Program Manager is attached.

I have reviewed the Program Manager's deviation report and agree that the change(s), if necessary, are not recoverable. Accordingly, new baseline parameter(s) are attached.

I endorse the baseline change.

I

Date

Administration Acquisition Executive

Attachment 2 Baseline Change Endorsement Format

COST BENEFIT ANALYSIS (CBA)

- 1. **PURPOSE**. The CBA analyzes the relationship between the life cycle cost and the operational effectiveness of a concept/ alternative which is technically feasible and can meet the mission need. The purpose of each analysis is to:
- a. aid decision-making by clearly indicating the relative advantages and disadvantages of the concepts/alternatives being considered and the sensitivity of each concept/alternative to possible changes in key assumptions;
- b. facilitate communications by early identification and discussion of reasonable concepts/alternatives among decision makers and staffs at all levels; and
- c. document acquisition decisions by providing the analytical underpinning or rationale for decisions on a program.
- 2. **PRESCRIPTION**. CBAs shall be prepared for all alternatives analyzed during Phase 1. CBA updates shall be prepared in subsequent phases for each of the alternatives remaining in the program. After selection of the most feasible alternative, the CBA is to be updated when significant changes occur to any of the parameters initially used.
- 3. APPROVAL. All CBAs shall be endorsed by the AAE.
- 4. **DISTRIBUTION**. The distribution of the CBA and updates shall be in accordance with OA procedures. The CBA shall be made available to the TAE upon request of the TSARC Executive Secretary.
- 5. **CONTENTS**. The contents and the format for the CBA shall be in accordance with OA procedures. However, those procedures must include the following minimum guidelines:
- a. **Mission Need Analysis**. Concepts/alternatives must be assessed to identify what operational capabilities would be gained (or foregone) by pursuing the proposed concepts/alternatives. Any constraints and assumptions that limit the viable concepts/alternatives to be pursued should be explicitly identified. These may change over time.
- b. System Interrelationships. The CBA must consider all relevant systems and the effect they collectively will have in the prospective operational environment.

- c. **Multi-Role Systems**. A system/item may accomplish significantly different functions at different times. The CBA should account for flexibility of this nature.
- d. **Benefits**. Benefits should be defined to measure operational capabilities in terms of desired outcomes (e.g., lives saved, time saved). Benefits should be related to performance measures such that the effect of a change in performance can be related to a change in benefits.
- e. **Costs**. Life cycle costs associated with each alternative being considered are to be identified in the CBA. The life cycle costs used in the CBA should be the same as those identified in the LCCE.
 - f. Cost-Benefits Comparisons. The results of the costs and benefits should be arrayed for each alternative to show the marginal changes. Uncertainties should be clearly identified in the analysis.
 - g. **Sensitivity Analysis**. Sensitivity analyses should also be conducted as appropriate to highlight the magnitude of effects resulting from realistic possible changes or uncertainties in key performance criteria, operational scenario, or other baseline parameters.

EXIT CRITERIA

1. **PURPOSE**. The purpose of the document is to identify program specific accomplishments that must be satisfactorily demonstrated before the program can progress further in an acquisition phase, or transition to the next acquisition phase. The exit criteria are directly related to and supplement the phase objectives, the required accomplishments of the phase, and the documents to be produced as described in Section IIB of this document.

2. PRESCRIPTION.

- a. At each KDP through KDP 3, the OA shall propose exit criteria that must be satisfied during the subsequent acquisition phase. The cognizant acquisition executive will use the exit criteria as a measure in determining whether the program is ready to proceed at the next KDP. For example, the proposed exit criteria submitted at KDP 1 shall be applicable to activities to be accomplished during Phase 1 and will be evaluated by the cognizant acquisition executive before authorizing KDP 2.
- b. Proposed exit criteria may be submitted as a separate document or as an appendix to the MNS/revalidated MNS. Proposed exit criteria shall be linked to the acquisition strategy objectives contained within the MNS and tailored to each acquisition phase.
- 3. **APPROVAL**. The cognizant acquisition executive shall approve exit criteria at KDP's 1 through 3. This shall be done by specific reference in the ADM, either approving the criteria in total or by documenting directed changes.
- a. Proposed exit criteria for Levels I and II acquisitions shall be approved by the TAE.
- b. Proposed exit criteria for Levels IIIA and IIIB acquisitions shall be approved by the AAE.
- 4. **DISTRIBUTION**. Copies of the proposed exit criteria shall be distributed as follows:
- a. KDP 1: One copy for all acquisition levels to the TAE via the TSARC Executive Secretary;
- b. KDPs 2 and 3: One copy for Levels I and II acquisitions to the TAE via the TSARC Executive Secretary; and

c. KDPs 2 and 3: Copies for Levels IIIA and IIIB acquisitions shall be distributed in accordance with OA procedures. Copies shall be made available to the TAE upon request of the TSARC Executive Secretary.

5. **CONTENTS**.

- a. The format for the proposed exit criteria shall be in accordance with OA procedures. Exit criteria are different for each phase as well as each program. They must be tailored to program specific goals and objectives and relate to planned accomplishments and documents for the next phase.
- b. Proposed exit criteria shall always include technical, schedule and cost elements and typically include such factors as:
- (1) Test reports that contain critical test results that demonstrate operational and technical thresholds and performance parameters;
 - (2) Risk reduction goals;
 - (3) Completion of studies;
 - (4) Development/approval of documents; and
 - (5) Completion of key events/activities.

INTEGRATED LOGISTIC SUPPORT PLAN (ILSP)

- 1. **PURPOSE**. The purpose of an ILSP is to:
- a. Identify support requirements that are related consistently to performance objectives, to design, and to each other;
- b. Effectively integrate support considerations into the system and equipment design;
- c. Identify the most cost-effective approach to supporting the system when it is fielded;
- d. Ensure that the required support structure elements are developed and acquired during the acquisition process; and
- e. Ensure continued attainment of performance objectives with economical logistics support throughout the life of the system.
- 2. **PRESCRIPTION**. An initial ILSP shall be prepared by the Program Manager during Phase 1 for Levels I and IIIA acquisitions. The ILSP shall be updated, as required, during each subsequent acquisition phase.
- 3. **APPROVAL**. ILSP and updates shall be reviewed and approved in accordance with OA procedures.
- 4. **DISTRIBUTION**. The distribution of an ILSP and updates shall be in accordance with OA procedures. The ILSP is to be made available to the TAE upon request of the TSARC Executive Secretary.
- 5. **CONTENTS**. The ILSP shall be prepared in accordance with OA procedures. The following are the subject areas which are to be addressed in a format specified by the OA. Actual content may vary in accordance with OA requirements.
 - a. <u>Maintenance Planning</u>. The process conducted to evolve and establish maintenance concepts/alternatives and requirements for the lifetime of the system.
 - b. <u>Manpower and Personnel</u>. The identification and acquisition of personnel with the skills and grades required to operate and support the system over its lifetime.

- c. <u>Supply Support</u>. All management actions, procedures, and techniques used to determine requirements to acquire, catalog, receive, store, transfer, issue, and dispose of secondary items. This includes provisioning for both initial support and replenishment supply support. It includes the acquisition of logistics support for support and test equipment.
- d. <u>Support Equipment</u>. All equipment (mobile or fixed) required to support the operation and maintenance of the system. This includes associated multi-use end items, ground handling and maintenance equipment, tools, metrology and calibration equipment, test equipment, and automatic test equipment.
- e. <u>Technical Data</u>. Scientific or technical information recorded in any form or medium (such as manuals and drawings). Computer programs and related software are not technical data; documentation of computer programs and related software are. Also excluded are financial data or other information related to contract administration.
- f. <u>Training and Training Support</u>. The analysis, design, development, implementation, and evaluation of training to support the system. This includes conducting needs analyses; job and task analyses; delivering individual and crew training resident and nonresident training; on-the-job training; job aids; and logistic support planning for training aids and training installations.
- g. <u>Computer Resources Support</u>. The facilities, hardware, system software, software development and support tools, documentation, and people needed to operate and support embedded computer systems.
- h. **Facilities**. The permanent, semipermanent, or temporary real property assets required to support the system, including conducting studies to define facilities or facility improvements, locations, space needs, utilities, environmental requirements, real estate requirements, and equipment.
- i. <u>Packaging, Handling, Storage, and Transportation</u>. The resources, processes, procedures, design considerations, and methods to ensure that all system, equipment, and support items are preserved, packaged, handled, and transported properly, including environmental considerations, equipment preservation requirements for short and long term storage, and transportability.

j. <u>Design Interface</u>. The relationship of logistics related design parameters to readiness and support resource requirements. These logistics related design parameters are expressed in operational terms rather than as inherent values and specifically relate to system readiness objectives and support costs of the system.

LIFE CYCLE COST ESTIMATES (LCCE)

1. **PURPOSE**. The purpose of LCCE is to identify the total cost to the Government of an item or system over its useful life, including development, procurement, operation, support, an end-of-service-life disposal.

2. PRESCRIPTION.

- (a) The LCCE shall be submitted for all acquisition levels beginning at KDP 2 and updated at subsequent KDPs. The LCCE may be submitted as a separate document or as an appendix to the AP.
 - (b) The LCCE for each KDP should be as follows:
 - (1) **KDP 2.** At KDP 2, the Program Manager (PM) shall submit a LCCE for each technically feasible alternative.
 - (2) KDPs 3 and 4. At KDPs 3 and 4 the PM shall submit a detailed LCCE.
 - 3. APPROVAL. The LCCE and updates shall be endorsed by the AAE in accordance with OA procedures.
 - 4. **DISTRIBUTION.** A copy of the LCCE (for Levels I and II acquisitions) and updates shall be provided to the TAE at each KDP after KDP 1. The distribution of the LCCE for Level III acquisitions shall be in accordance with OA procedures.
 - 5. **CONTENTS**. The format for a LCCE shall be in accordance with OA procedures.
 - a. The LCCE, at a minimum, shall:
 - (1) Include total acquisition costs, regardless of funding source or management control;
 - (2) Include the entire program as currently planned, rather than limiting costs to an arbitrary term of years;
 - (3) Include all cost categories and appropriations;
 - (4) Include all applicable budget accounts and categories;
 - (5) Include the value of items procured for some other purpose, but used on the system; and

- (6) Cover all alternatives that are being considered for the decision at hand.
 - b. For Levels I and IIIA acquisitions:
- (1) Estimates shall be based on program objectives, operational requirements, and contract specifications for the system and shall identify all elements of cost that will be entailed by a decision to proceed with development, production, and operation and support of the item or system.
- (2) The documentation in support of LCCEs shall provide sufficient information about the way the estimates were developed and the rationale for any assumptions made so that the estimates can be analyzed and reviewed by an independent source.

LONG RANGE RESOURCE ALLOCATION PLANNING (LRRAP) INFORMATION

- 1. **PURPOSE**. The purpose of the LRRAP information is to allow the cognizant acquisition executive to make realistic affordability decisions for each acquisition, both as an individual program and as an element of the total needs of the OA.
- 2. **PRESCRIPTION**. An LRRAP process that will generate the type of information required under paragraph 5 below must be in place no later than May 31, 1993. The LRRAP information required shall be submitted to the TAE via the TSARC Executive Secretary annually no later than 15 days after the OA has submitted the annual OST stage budget. Concurrent with its submission, the OA should be prepared to brief the TSARC members and staff on the LRRAP information. If a briefing is required, the AAE will be notified at least 30 days in advance of the expected submission.
- 3. **APPROVAL**. The HOA or designee (no lower than the AAE) shall ensure that an LRRAP process is established and shall validate the LRRAP information submitted to the TAE annually.
- 4. **DISTRIBUTION**. Two copies of the LRRAP information shall be provided to the TAE via the TSARC Executive Secretary.
- 5. **CONTENTS**. The LRRAP information may be in the format generated by the OA's planning system. However, at a minimum the following guidelines must be met:
- (a) The LRRAP information must cover a 15 year projection of the OA needs that will be satisfied through major acquisitions. For the initial 10 year period, the information should identify existing and projected programs, their schedules and budget requirements (by fiscal year to the extent possible). For the last 5 year period, the information should cover existing programs that extend that far and projected programs. Budget data for projected programs during the last 5 year period may be in summary form (i.e., not by FY) and may include a range of values.
- (b) The LRRAP information shall cover all major acquisitions regardless of appropriation. Acquisitions using operations funding need not be included until the 1994 submission.
- (c) The LRRAP information must include enough data about the projected budgets in areas other than major acquisitions to be able to see the impact of decisions on major acquisitions on the overall OA planning profile.

(d) The LRRAP information must include a summary of the information provided (chart or tabular format is acceptable) to make the information accessible and useful for supporting decision making by the TAE or AAE at KDP's.

MISSION NEED STATEMENT (MNS)

- 1. **PURPOSE**. The purpose of the MNS is to describe specific functional capability deficiencies which cannot be met with non-material solutions. The MNS is normally derived from a quantified, well-documented, objective mission analysis. Submission of the MNS initiates the major acquisition process.
- 2. **PRESCRIPTION**. When a deficiency is identified by the mission analysis, and the OA believes the deficiency can best be met by a major acquisition, a MNS shall be prepared. The MNS is normally prepared by the user/sponsor organization responsible for performing the mission function. The MNS shall be revalidated and updated whenever a change to the mission is identified and/or at each KDP.
- 3. APPROVAL. The TAE shall approve the MNS as part of KDP 1 and approve subsequent updates for Level I and II acquisitions. The AAE shall approve updates for Level III acquisitions. In those instances where a page change is necessary prior to approval by the TAE, the originator shall make the necessary change and have it initialled by the AAE prior to forwarding to the TSARC Executive Secretary. Approval of the initial MNS is required before funds will be included in the budget submitted to OMB.
- 4. **DISTRIBUTION**. One copy of the MNS or updates shall be submitted to the TAE via the TSARC Executive Secretary.

5. **CONTENTS**.

- a. When updates to the initial MNS are provided, each page shall indicate the revision number and date on the bottom (e.g., "Revision 1, Oct. 1, 1992" indicates the first revision submitted on October 1, 1992). When a page change is provided, an indicator (bar) shall be placed on the side of the page to identify the change.
- b. The MNS must include a cover page which identifies the acquisition and includes a signature block for the OA approving official. Other signatures on the cover page shall be in accordance with OA procedures. The OA approving official's signature on a transmittal memo does not meet this requirement.
- c. The following format shall be used for all MNS submissions:

- (1) <u>Description of the Mission</u>. Identify, in functional terms, the required mission. State the mission need in terms of functional capabilities desired and not in terms of equipment or other means which might satisfy the need. Cite the statutory and/or regulatory authority for the mission.
- (2) <u>Rationale for the Acquisition</u>. Indicate why the acquisition is necessary and how it will be accomplished.
- (a) Current Capability. Briefly summarize the current capability including existing assets.
- (b) Planned Capability. State the mission need in terms of functional capability desired and not in terms of equipment or other means which might satisfy the need. Cite the results of the mission analysis supporting that a functional deficiency exists which creates the need for the planned capability.
- (c) Proposed Alternatives. Discuss the alternatives considered or to be considered and the potential risks involved. Provide the key acquisition strategy objectives.
- (3) <u>Impact of Disapproving the Acquisition</u>. Assess why it is not possible to accomplish the mission with existing capabilities and list any known constraints (including budget, personnel, operational, logistics and maintenance considerations, time factors, etc.). Discuss the ability to perform the mission with existing resources. Describe potential opportunities for technological enhancement, obsolescence of equipment, and cost savings.
- (4) Resources Required. Provide rough-order-of-magnitude estimates for total acquisition costs at KDP 1 and, at subsequent KDP's, provide life-cycle cost goals for each alternative remaining in the program. Discuss the timing of the need and the general priority of this mission relative to other missions in the OA. Indicate if other Governmental agencies or OAs are impacted.
- (5) <u>Decisions Requested</u>. Indicate what decisions are required of the TAE. Typical decisions for initial mission need approval may include:
 - (a) Approval of the mission need;
- (b) Designation of the major acquisition as a Level I, II, or III; and
 - (c) Proceeding to the next applicable KDP.

OPERATIONAL REQUIREMENTS DOCUMENT (ORD)

1. **PURPOSE**. The ORD serves as a bridge between the operational and functional requirements spelled out in the MNS and the technical requirements which will govern development of the system. The ORD is a top level management document that provides the basis for the APB and is used to develop requirements for the system specification. The ORD defines the mission critical performance parameters that serve as the basis for all subsequent acquisition phases.

2. PRESCRIPTION.

- a. An initial ORD is prepared by the user/sponsor during Phase 1 for the most promising system concept(s)/alternative(s). The initial ORD identifies top level, mission critical requirements in terms of minimum thresholds and operationally effective goals needed to develop and evaluate alternative system design concepts/alternatives. Based on the initial ORD, functional requirements and system concepts/ alternatives are analyzed and evaluated and the best system concept(s)/alternative(s) selected and described. The optimum capabilities resulting from these trade-off analyses are documented as mission critical performance objectives.
- b. Depending on the developmental nature of the program, at a minimum, an initial ORD shall be in place at the end of Phase 1 to support the KDP 2 decision. The initial ORD must be refined into the formal ORD no later than the end of Phase 2 to support the KDP 3 decision. Once the formal ORD is established either at KDP 2 or KDP 3, it should be modified only as a result of a change in the MNS or cost-schedule-performance trade-offs. All changes to the ORD will be revalidated and updated by the user/sponsor. If changes to the ORD are made, the APB shall be reviewed for any impact on the APB.
- 3. **APPROVAL**. ORD approval shall be in accordance with OA procedures.
- 4. **DISTRIBUTION**. The distribution of the ORD shall be in accordance with OA procedures. The ORD shall be made available to the TAE upon request of the TSARC Executive Secretary.
- 5. **CONTENTS**. The format for the ORD shall be in accordance with OA procedures. As a minimum, the content shall include the following:

- a. The top level mission critical performance requirements shall be expressed as the minimum acceptable requirements (threshold) to satisfy operational needs and the proposed performance objectives (optimum) to define an operationally effective system. The mission critical performance parameters established by the ORD will be incorporated into the APB, and the ORD will provide input for the development of the TEMP and Operational Test and Evaluation critical operational and performance thresholds.
 - b. The ORD shall contain, as a minimum: (1) a general description of the operational capability; (2) a description of the overall mission area and the anticipated operational and support concepts/alternatives; (3) critical operational issues; (4) the capabilities required (e.g., system performance, logistics); (5) infrastructure support (e.g., interfacing systems, environmental support); and (6) the critical system characteristics.

PHASE 1 PROPOSAL

- 1. **PURPOSE**. The purpose of the Phase 1 Proposal is to provide brief planning information and the acquisition strategy for acquisitions going into Phase 1.
- 2. **PRESCRIPTION**. The Phase 1 Proposal shall be submitted at KDP 1 or within six months of KDP 1 approval for all acquisition levels. It may be submitted as a separate document or as an appendix to the MNS. The Phase 1 Proposal must be approved prior to the release of a synopsis under FAR 5.2; issuance of a solicitation (draft or otherwise); or transfer of funds within or outside DOT, for Phase 1 activities unless otherwise authorized by the Assistant Secretary for Administration.
- 3. APPROVAL. The Phase 1 Proposal shall be approved as follows:
- a. Levels I and II acquisitions shall be approved by the TAE.
- b. Levels IIIA and IIIB acquisitions shall be approved by the AAE. $\,$
- 4. **DISTRIBUTION**. If the Phase I Proposal is submitted at KDP 1, one copy of the Phase 1 Proposal shall be submitted to the TAE via the TSARC Executive Secretary. If the Phase I Proposal is submitted after KDP 1:
- a. One copy shall be submitted to the TAE via the TSARC Executive Secretary for Levels I and II acquisitions.
 - b. Distribution shall be in accordance with OA procedures for Level III acquisitions. One copy of the approved Phase I Proposal, if requested by the TAE, shall be submitted to the TSARC Executive Secretary for Level III acquisitions.
 - 5. **CONTENTS**. The contents of the Phase 1 Proposal shall include the following:
 - a. Concepts/alternatives to be explored (provide only a listing; do not repeat the descriptive material in the MNS).
 - b. Cost estimate for Phase 1 (funds, personnel, cost ceiling, source for resources).
 - c. Acquisition strategy for Phase 1 including proposed milestones.

The format for the Phase 1 Proposal shall be in accordance with OA procedures.

PROGRAM/PHASE DEVIATION REPORT

- 1. **PURPOSE**. A deviation report is to provide notification that the baseline parameter(s) (including the cost baseline for an upcoming phase) of the APB (including Appendix A) need to be changed.
- 2. **PRESCRIPTION**. A deviation report shall be prepared for the program (Program Deviation Report (PDR)) and/or the phase (Phase Deviation Report (PhDR) as soon as the Program Manager (PM) believes that a change to the baseline is necessary. The deviation report shall be attached to the baseline revision submitted to the approving official.
- 3. APPROVAL. The deviation report shall be prepared by the PM and submitted for OA approval to the AAE. Within 60 days of the deviation report receipt, the AAE shall notify the TAE (for Level I and II acquisitions) of the change, reason for the change, and, for a breach, any proposed corrective action. Changes to the baseline shall be made by the TAE (for Level I and II acquisitions) and by the AAE (for Level IIIA and IIIB acquisitions) within 30 days after receipt of the request.
- 4. **DISTRIBUTION**. One copy of the deviation report shall be submitted to the: (a) TAE for Level I and II acquisitions via the TSARC Executive Secretary; and (b) TSARC Executive Secretary for Level IIIA and IIIB acquisitions. (This shall be accompanied by the AAE endorsement of the Acquisition Program Baseline Change.)
- 5. **CONTENTS.** The deviation report shall be submitted in accordance with the attached format.

(Enter "PROGRAM" or "PHASE") DEVIATION REPORT (FORMAT)

Subject: (Insert name of program followed by the word(s)
"Program" and/or "Phase" as applicable) Deviation
Report

(Insert name of program) has changed from its current approved baseline, dated MM/DD/YY, for the following reasons. (Give reasons for the change and its impact on the program).

(Describe alternatives considered, other than changing the approved acquisition program baseline, the alternative recommended and why, or the reasons for not adopting any of these alternatives.)

I request approval for the acquisition baseline change(s) as attached.

Program	Manager	

Attachment PDR/PhDR Format

PROGRAM MANAGER (PM) CHARTER

- 1. **PURPOSE**. The PM Charter shall specify the responsibility, authority, and accountability of the PM.
- 2. PRESCRIPTION. The PM Charter shall be prepared in Phase 1.
- 3. **APPROVAL**. The PM Charter shall be approved in accordance with OA procedures.
- 4. **DISTRIBUTION**. The PM Charter shall be distributed in accordance with OA procedures. The PM Charter is to be made available to the TAE upon request of the TSARC Executive Secretary.
- 5. **CONTENTS**. The contents of the PM Charter shall be in accordance with OA procedures. At a minimum, the charter shall identify the scope of the PM's authority and lines of accountability.

RISK MANAGEMENT PLAN (RMP)

- 1. **PURPOSE**. The purpose of the RMP is to develop a structured approach to managing program risks.
- 2. **PRESCRIPTION**. RMPs are required to be developed by the PM for Levels I and IIIA acquisitions. The initial RMP is to be developed in Phase 1 and updated as appropriate during each subsequent acquisition phase.
- 3. **APPROVAL**. The RMP and any updates shall be approved in accordance with OA procedures. The RMP shall be made available to the TAE upon request of the TSARC Executive Secretary.
- 4. **DISTRIBUTION**. The distribution of RMP shall be in accordance with OA procedures.

5. CONTENTS.

- a. At a minimum, the RMP shall:
- (1) specify management strategies for each risk element;
- (2) assess the possible negative impacts of each risk element (or aggregation of risk elements) on the program; and
- (3) specify the cost of the management strategies for each risk element.
- b. The plan shall address critical parameters that are design cost drivers or have a significant impact on readiness, capability, and life cycle costs. These parameters shall be identified early and managed intensively.
- c. The plan shall address how test and evaluation shall be used to determine system maturity and to identify areas of technical and operational risk.
- d. The plan shall identify how solicitation documents will be structured to require contractors to identify risks and specify plans to assess and eliminate risks or reduce them to acceptable levels.

TEST AND EVALUATION MASTER PLAN (TEMP) AND SUBSIDIARY TEST PLANS

1. **PURPOSE**. The TEMP is the basic planning document for all test and evaluation (T&E) related to a particular program. The TEMP is a test and evaluation agreement between the user/sponsor, the developing organization, and the testing organization which establishes test schedules, test objectives and criteria, and resources required. Its primary purpose is to describe the necessary Developmental Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E) for each Level I and IIIA acquisition. The TEMP identifies all critical technical characteristics and operational issues and describes the objectives, responsibilities, resources, and schedules for all completed and planned T&E. The TEMP should support the performance requirements identified in the ORD.

2. PRESCRIPTION.

- a. A TEMP shall be developed by the PM during Phase 1 for each Level I and IIIA acquisition only. The TEMP shall be updated during subsequent acquisition phases as necessary. The PM shall coordinate all aspects of T&E to ensure that DT&E objectives support OT&E objectives and that user/sponsor input is considered throughout the T&E process.
- b. The TEMP shall include a DT&E and OT&E section. The intended user/sponsor organization shall participate in the development of the TEMP, in the conduct of OT&E, and in system design changes driven by the results of OT&E.
- c. For all Level I acquisitions, and those Level IIIA acquisitions that the TAE has determined at KDP 1 that Independent Oversight of OT&E is required, the Independent Oversight Organization shall review and comment on the TEMP.
 - d. Subsidiary test plans for DT&E and OT&E, if applicable, shall be prepared in accordance with OA procedures.
- e. Non-developmental items (NDI) (including Commercial-off-the-shelf (COTS) items) shall be tested to demonstrate compatibility with interfacing systems and to ensure that the items meet the functional requirements of the ORD. COTS requiring modification or which are intended to operate in a different environment than originally designed may require additional testing in order to verify performance and operational readiness.

- 3. **APPROVAL**. The TEMP and updates shall be approved in accordance with OA procedures. Subsidiary OT&E Plans and updates must be reviewed and commented on by the Independent Oversight Organization for Level I and applicable Level IIIA acquisitions.
- 4. **DISTRIBUTION**. The TEMP, updates and subsidiary test plans shall be distributed in accordance with OA procedures, with a copy of the TEMP to be provided to the Independent Oversight Organization, when applicable. The TEMP shall be made available to the TAE upon request of the TSARC Executive Secretary.

5. **CONTENTS**.

- a. The TEMP shall be prepared in accordance with OA procedures. The initial TEMP shall focus on testing required for Phase 2 and early operational assessments. To the extent possible, the initial TEMP should estimate the key resources necessary to accomplish the DT&E and OT&E. Subsequent updates to the initial TEMP shall reassess and refine these initial estimates.
- b. While the format will be in accordance with OA procedures, the following identifies the type of information that should be addressed in the TEMP or any subsidiary test plans:

1. **TEMP**.

- a. <u>Introduction</u>. The TEMP should briefly summarize the mission of the program. The minimum acceptable operational performance requirements and the critical technical parameters from the ORD should be included. The system/item design, including key features and subsystems, interfaces with existing or planned systems, and critical system characteristics or unique requirements should be briefly defined.
- b. **Program Summary**. The integrated test program schedule should be included along with a summary of the planned management and organization of the test program.
- c. <u>Developmental Test and Evaluation</u>. The objectives of the DT&E should be identified and it should be explained how they will be met. Any completed DT&E should be identified, with a discussion of all remaining DT&E that is planned, beginning with the date of the current TEMP revision and extending through completion of production.
 - d. Operational Test and Evaluation. It should be

explained how the planned program will demonstrate that the operational requirements will be met. The critical operational issues to be considered should be identified. Completed OT&E should be identified (as it relates to critical operational issues) and there should be a discussion of future OT&E addressing the systems to be tested, the objectives, planned events, scope of testing and scenarios. There should also be a discussion of the test limitations that may impact the resolution of affected critical operational issues.

- e. <u>Summary of Test and Evaluation Resources</u>. A summary of all key test and evaluation resources, both government and contractor, which will be used during the course of the program should be provided.
- 2. <u>Subsidiary test plans</u>. Any subsidiary test plans should include: test objectives, measures of effectiveness, planned operational scenarios, resources, test limitations, and methods of data gathering, reduction, and analysis. The planned test events should be described in sufficient detail to permit an assessment of operational realism.

GLOSSARY OF ACRONYMS

AAE - ADMINISTRATION ACQUISITION EXECUTIVE

AARC - ADMINISTRATION ACQUISITION REVIEW COUNCIL AC&I - ACQUISITION, CONSTRUCTION, AND IMPROVEMENT

ADM - ACQUISITION DECISION MEMORANDUM

AP - ACQUISITION PLAN

APB - ACQUISITION PROGRAM BASELINE

ASA - ASSISTANT SECRETARY FOR ADMINISTRATION

CBA - COST BENEFIT ANALYSIS
COTS - COMMERCIAL-OFF-THE-SHELF

DEMVAL- DEMONSTRATION AND VALIDATION DOT - DEPARTMENT OF TRANSPORTATION

DPA - DELEGATION OF PROCUREMENT AUTHORITY
DT&E - DEVELOPMENTAL TEST AND EVALUATION

FAR - FEDERAL ACQUISITION REGULATION FIP - FEDERAL INFORMATION PROCESSING

FIRMR - FEDERAL INFORMATION RESOURCE MANAGEMENT REGULATION

F&E - FACILITIES AND EQUIPMENT

HOA - HEAD OF THE OPERATING ADMINISTRATION

ILS - INTEGRATED LOGISTICS SUPPORT

ILSP - INTEGRATED LOGISTICS SUPPORT PLAN
IOC - INITIAL OPERATIONAL CAPABILITY

KDP - KEY DECISION POINT

LCCE - LIFE CYCLE COST ESTIMATE
LRIP - LOW-RATE-INITIAL-PRODUCTION

LRRAP - LONG RANGE RESOURCE ALLOCATION PLANNING

MAPC - MAJOR ACQUISITION POLICY COUNCIL

MAR - MAJOR ACQUISITION REVIEW MNS - MISSION NEED STATEMENT

NDI - NON-DEVELOPMENTAL ITEM

OA - OPERATING ADMINISTRATION

OMB - OFFICE OF MANAGEMENT AND BUDGET ORD - OPERATIONAL REQUIREMENT DOCUMENT

OST - OFFICE OF THE SECRETARY OF TRANSPORTATION

OT&E - OPERATIONAL, TEST AND EVALUATION

PDR - PROGRAM DEVIATION REPORT PhDR - PHASE DEVIATION REPORT

PM - PROGRAM MANAGER

GLOSSARY OF ACRONYMS (CONT'D)

RDT&E - RESEARCH, DEVELOPMENT, TEST AND EVALUATION

RMP - RISK MANAGEMENT PLAN

TAE - TRANSPORTATION ACQUISITION EXECUTIVE

TEMP - TEST AND EVALUATION MASTER PLAN

TSARC - TRANSPORTATION SYSTEMS ACQUISITION REVIEW

COUNCIL

T&E - TEST AND EVALUATION